

FIG. 1A

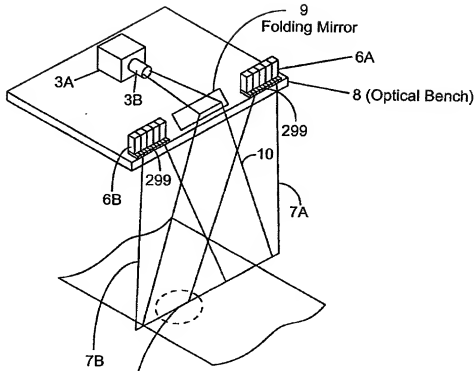


FIG. 1B1

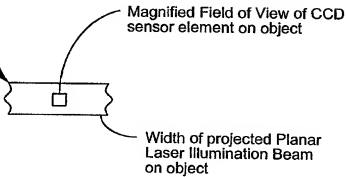


FIG. 1B3

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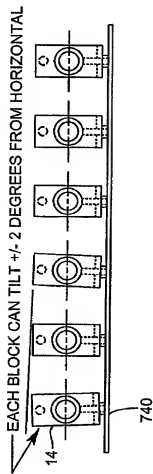


FIG. 1B4

VLD BLOCK CAN PITCH FORWARD FOR ALIGNMENT WITH OTHER VLD BEAMS

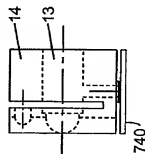


FIG. 1B5

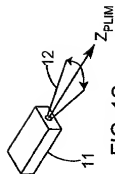


FIG. 1C

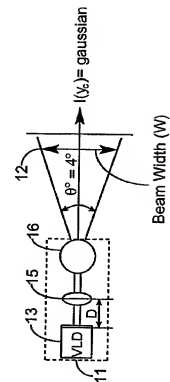


FIG. 1E1

FIG. 1D

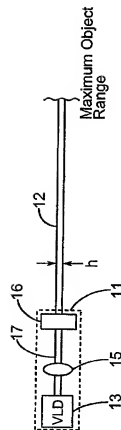
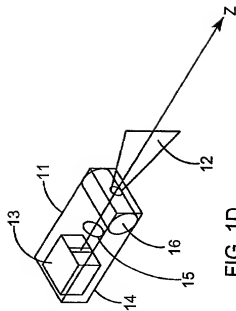


FIG. 1E2

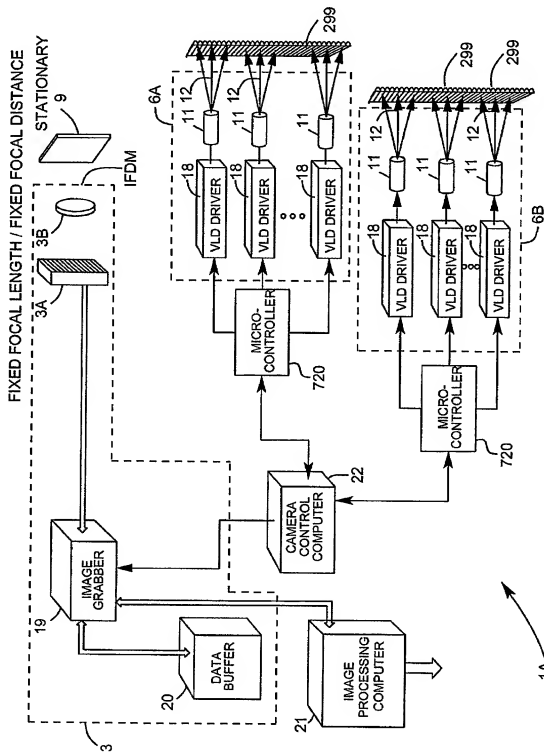


FIG. 1F

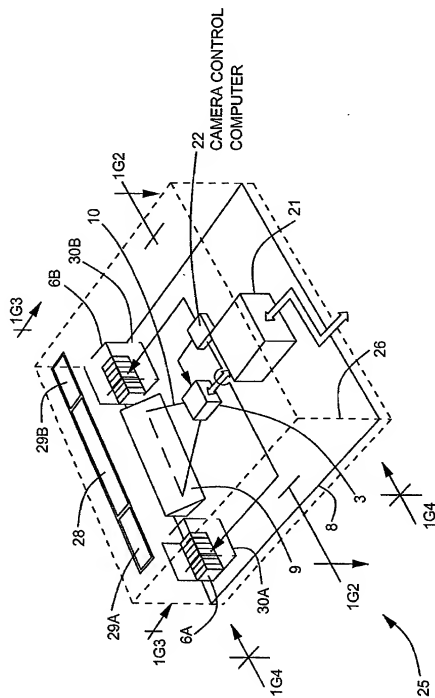


FIG. 1G1

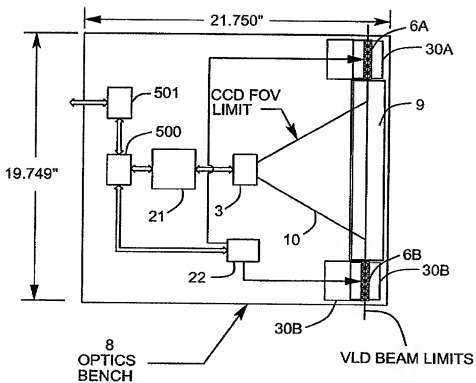


FIG. 1G2

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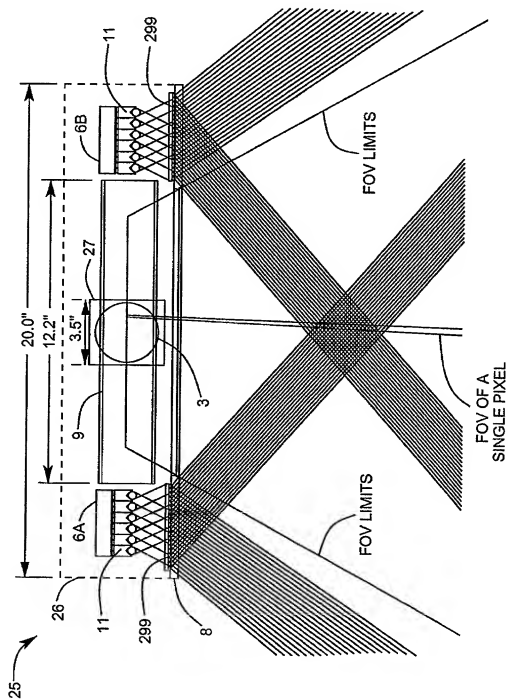


FIG. 1G3

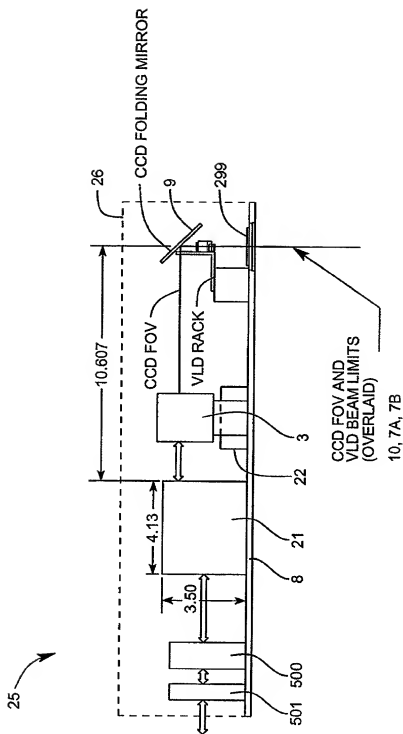
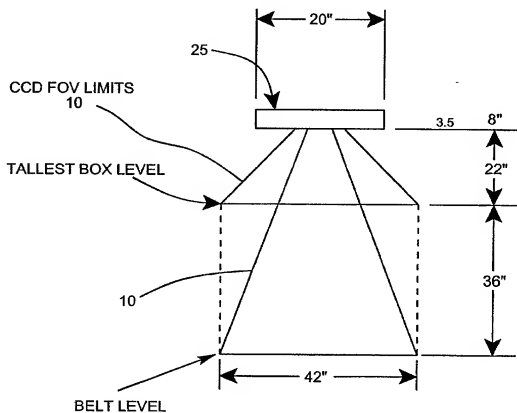


FIG. 1G4



* FIXED FIELD OF VIEW

FIG. 1G5

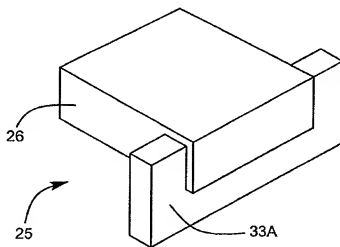


FIG. 1G6

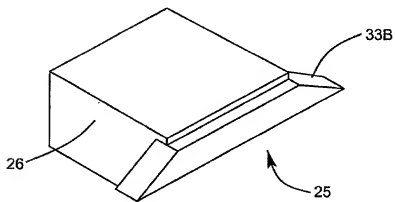
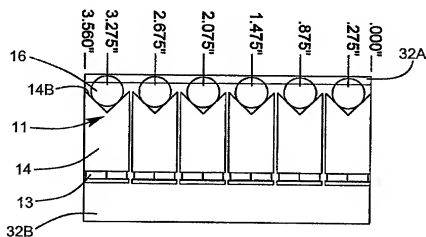
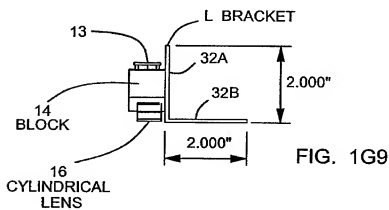
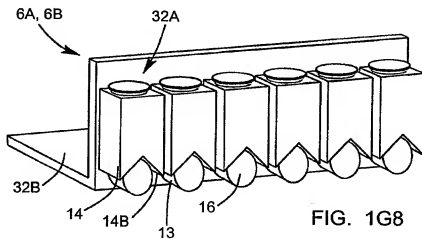


FIG. 1G7

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10067140-084202

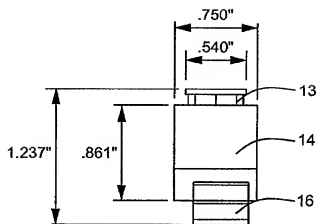


FIG. 1G11

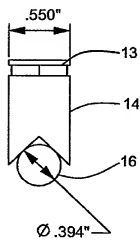


FIG. 1G12

202180-0412001

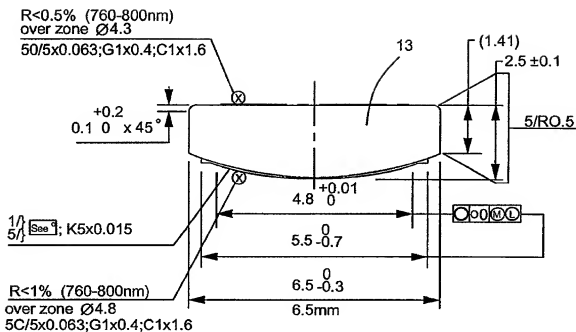


FIG. 1G13

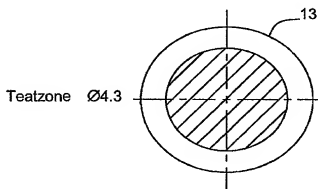


FIG. 1G14

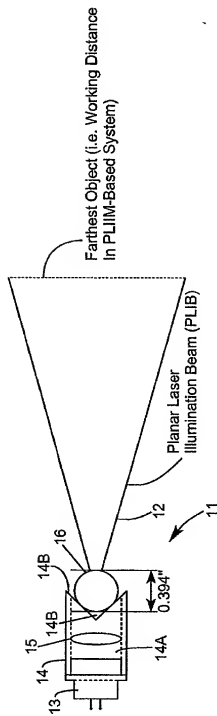


FIG. 1G15A

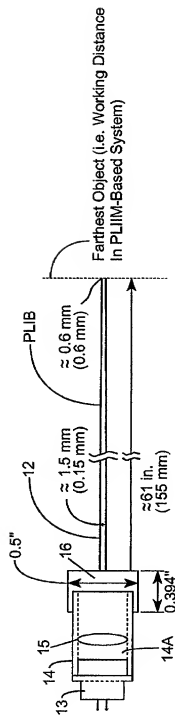


FIG. 1G15B

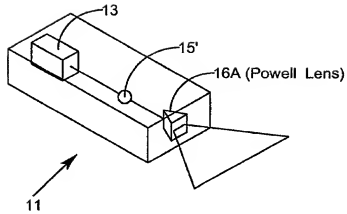


FIG. 1G16A

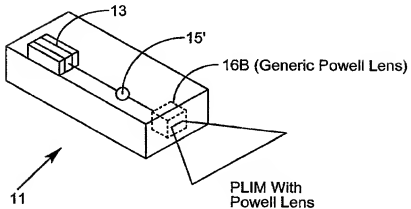


FIG. 1G16B

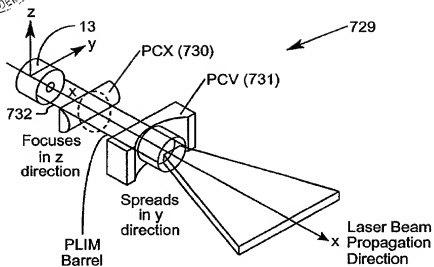


FIG. 1G17A

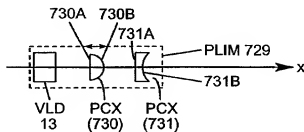


FIG. 1G17B

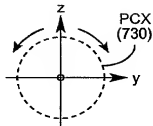


FIG. 1G17C

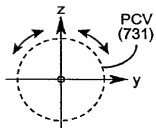


FIG. 1G17D

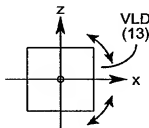


FIG. 1G17E

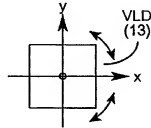


FIG. 1G17F

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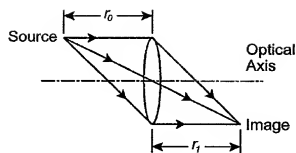


FIG. 1H1

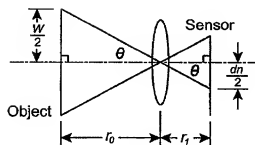


FIG. 1H2

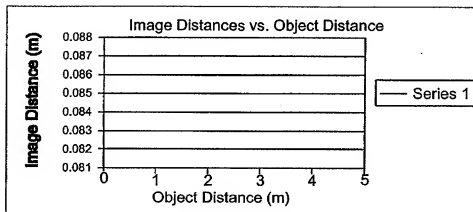


FIG. 1H3

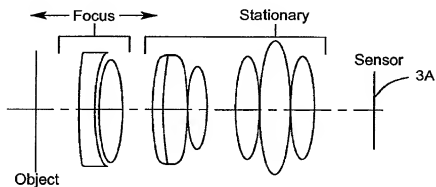


FIG. 1H4

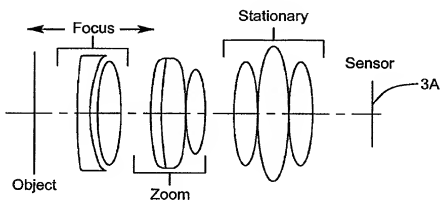


FIG. 1H5

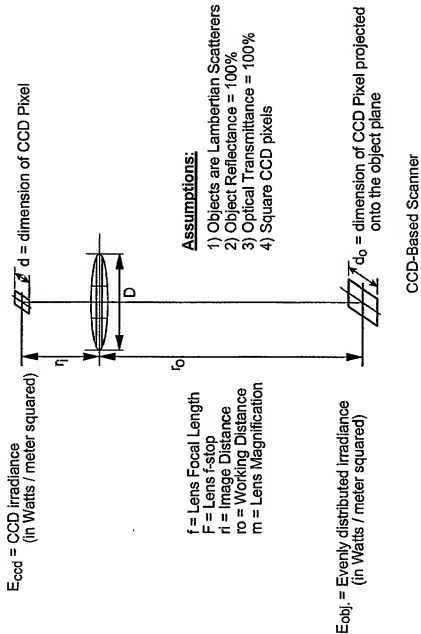


FIG. 1H6



FIRST GENERALIZED METHOD OF REDUCING
SPECKLE-NOISE PATTERNS AT IMAGE DETECTION
ARRAY OF THE IFD SUBSYSTEM (3)

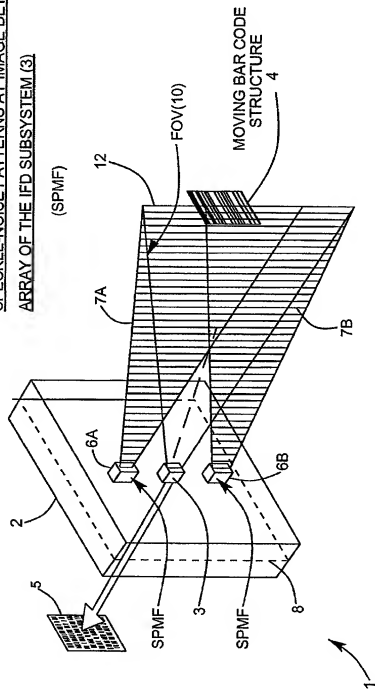


FIG. 111

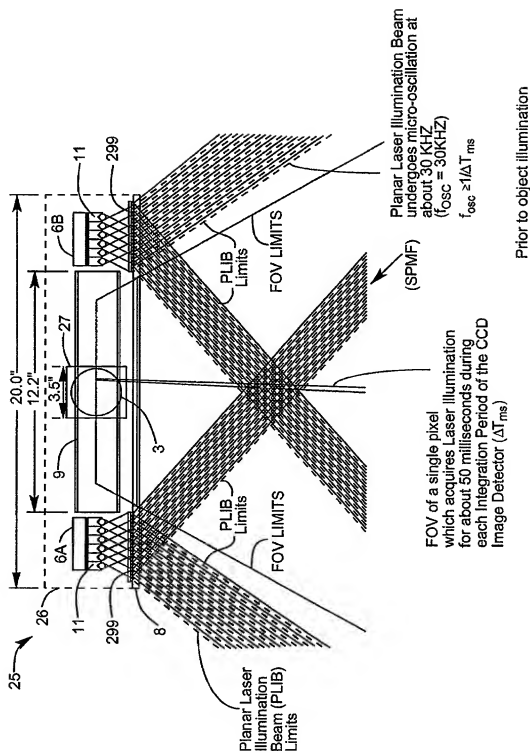


FIG. 112A



THE FIRST GENERALIZED SPECKLE-NOISE PATTERN REDUCTION
METHOD OF THE PRESENT INVENTION

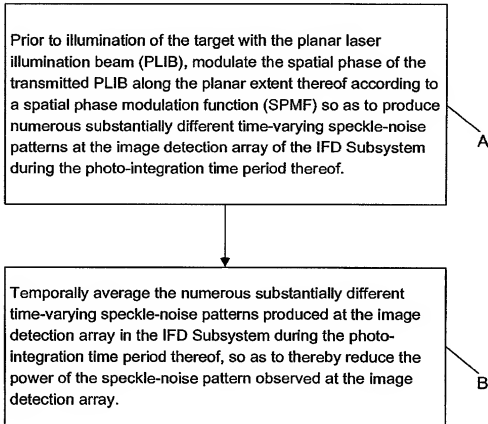
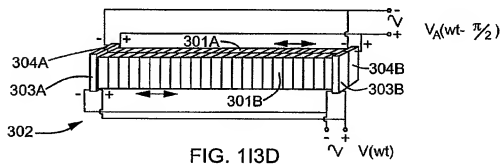
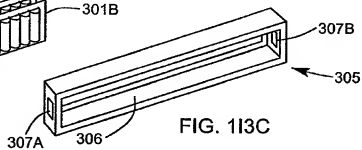
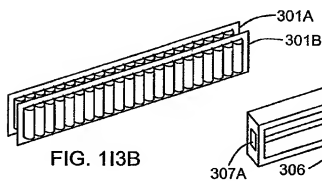
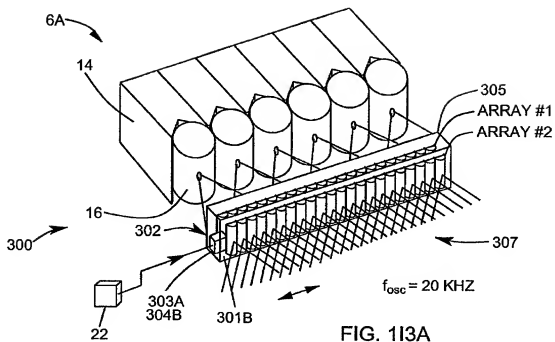
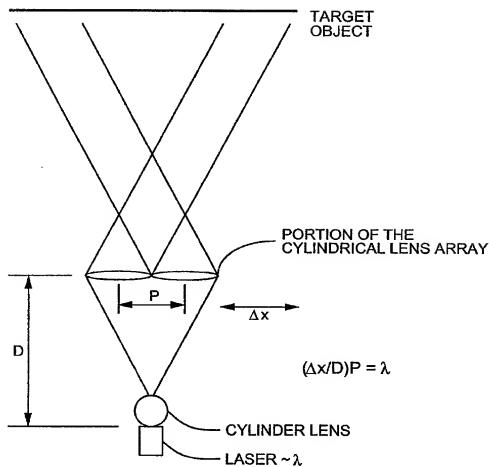


FIG. 112B





$$\Delta x \geq \frac{\lambda \cdot D}{P}$$

FIG. 113E

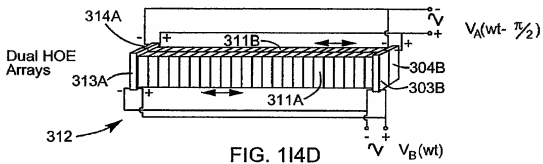
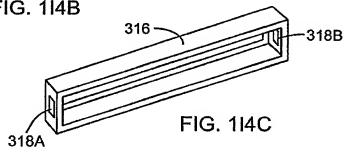
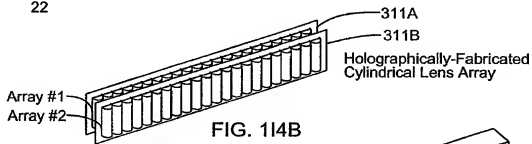
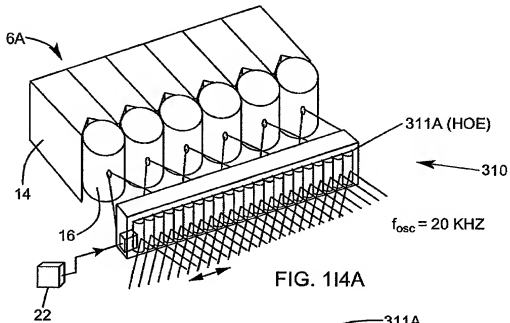


FIG. 113F



FIG. 113G

202180 0112001



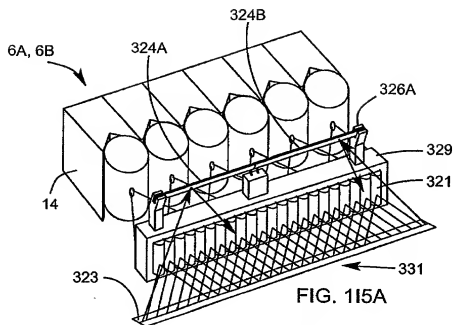


FIG. 115A

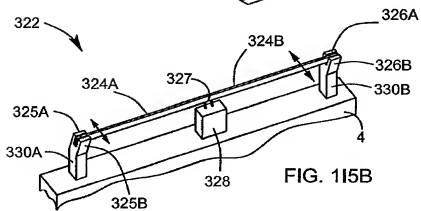


FIG. 115B

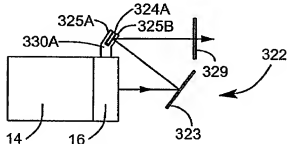


FIG. 115C

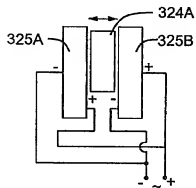


FIG. 115D

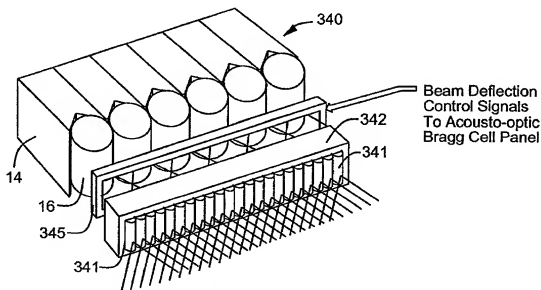


FIG. 116A

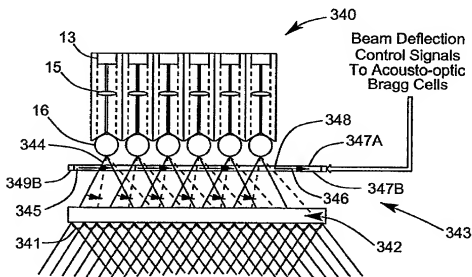
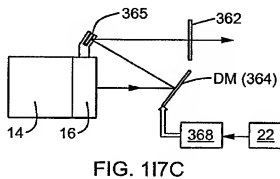
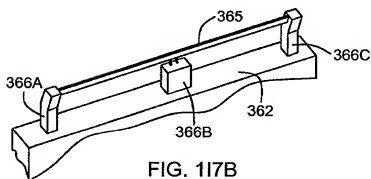
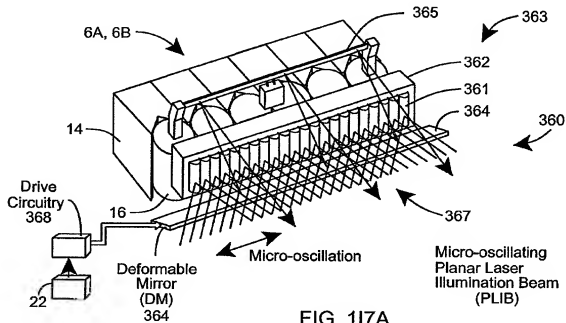


FIG. 116B





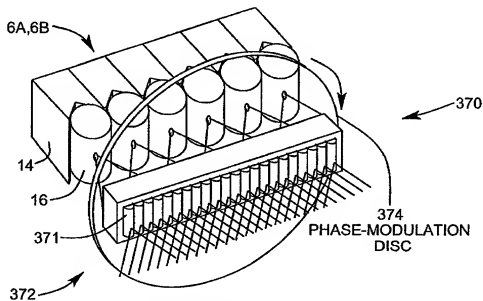


FIG. 118A

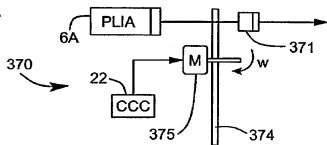


FIG. 118B

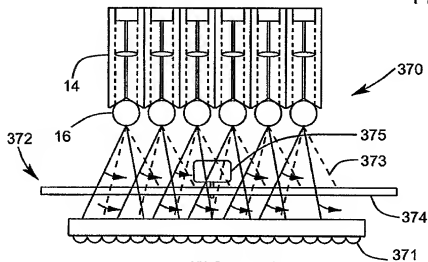


FIG. 118C



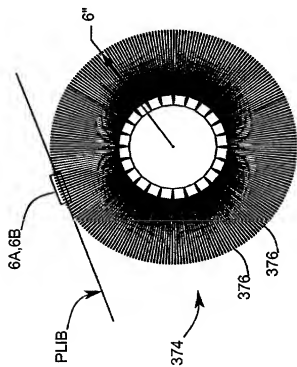


FIG. 118D

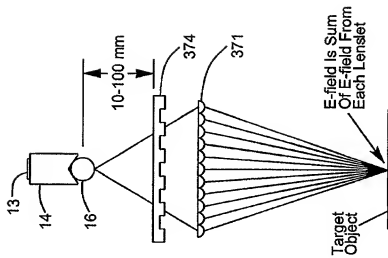


FIG. 118E



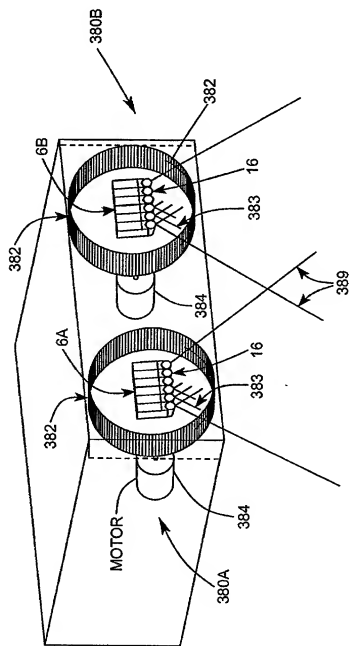


FIG. 119A



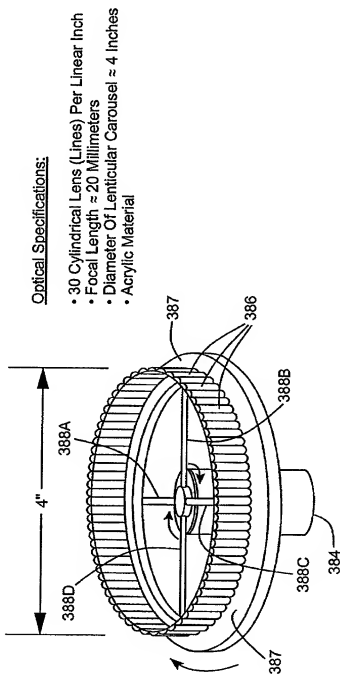


FIG. 119B



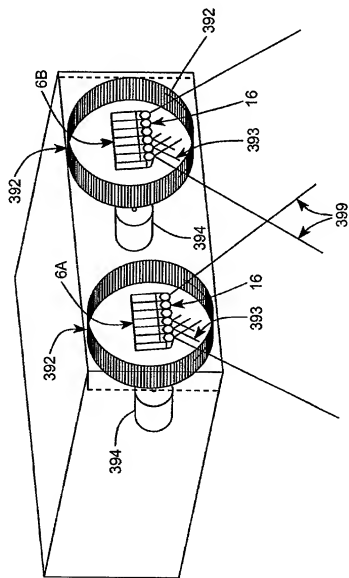
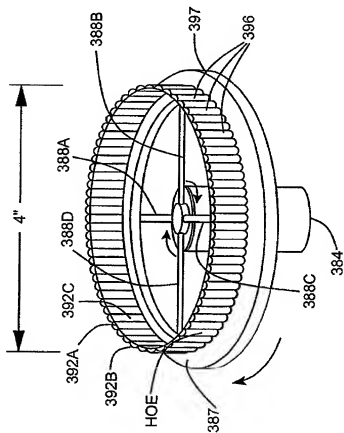


FIG. 1110A





Optical Specifications:

- 30 Cylindrical Lens (Lines) Per Linear Inch
- Focal Length \approx 20 Millimeters
- Diameter Of Lenticular Carousel \approx 4 Inches

FIG. 110B



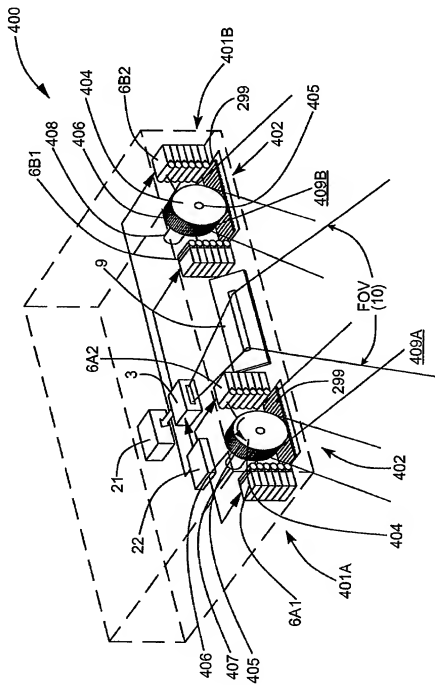


FIG. 1111A



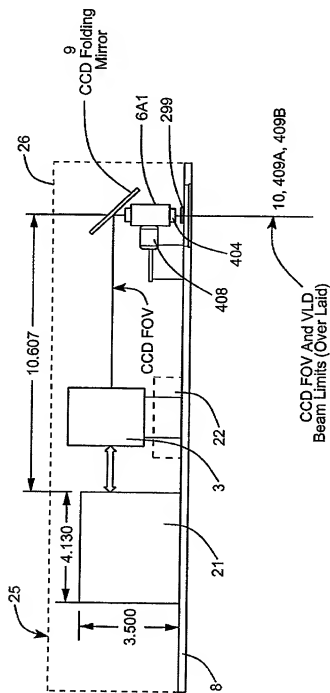
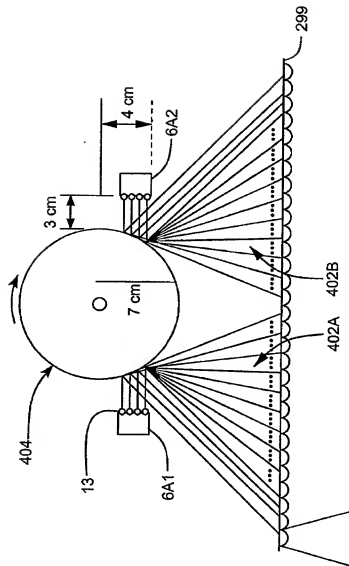


FIG. 111B





202180-01720001

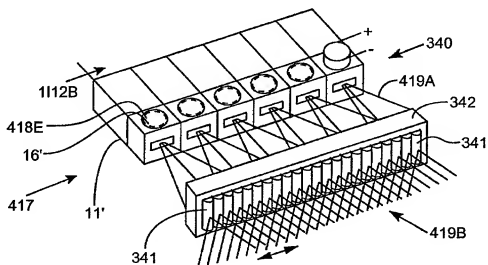


FIG. 1112A

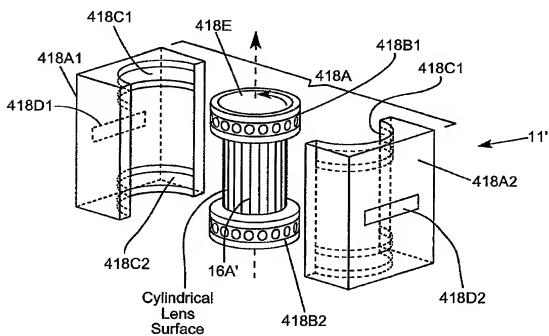


FIG. 1112B



202180-0412002

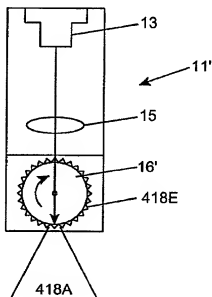


FIG. 1112C

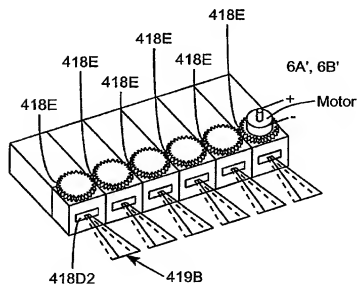


FIG. 1112D



Second Generalized Method Of
Reducing Speckle-Noise Patterns
At Image Detection Array
Of The IFD Subsystem (3)

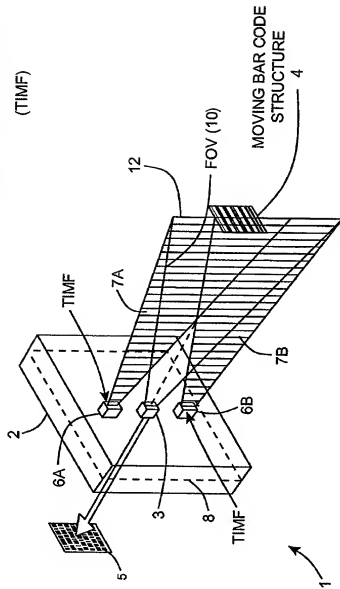


FIG. 1113



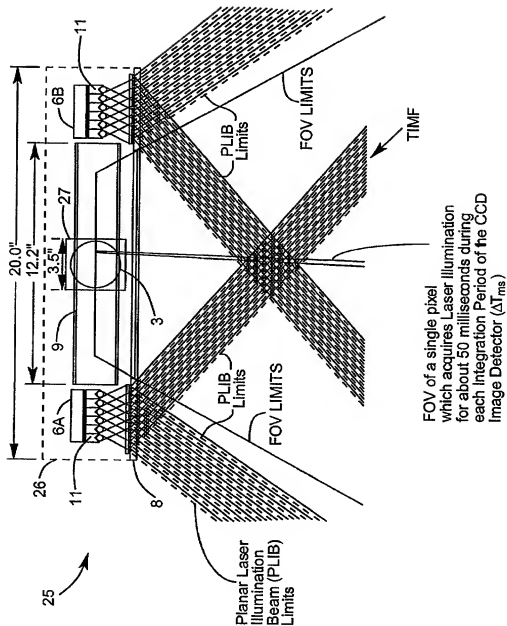


FIG. 1113A



THE SECOND GENERALIZED SPECKLE-NOISE PATTERN REDUCTION
METHOD OF THE PRESENT INVENTION

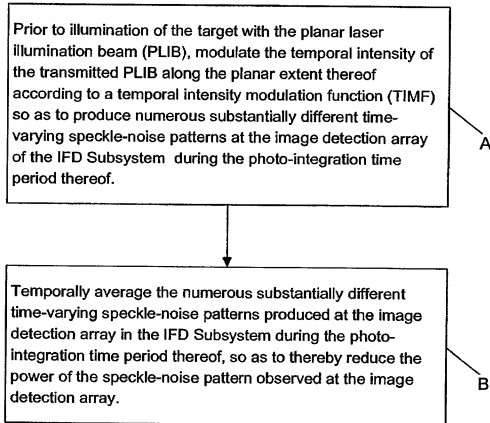
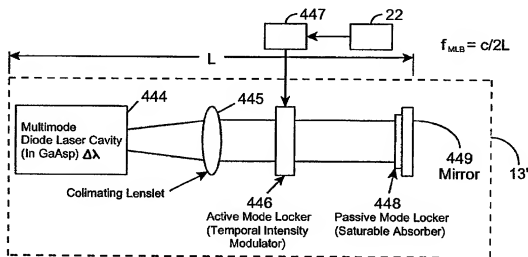
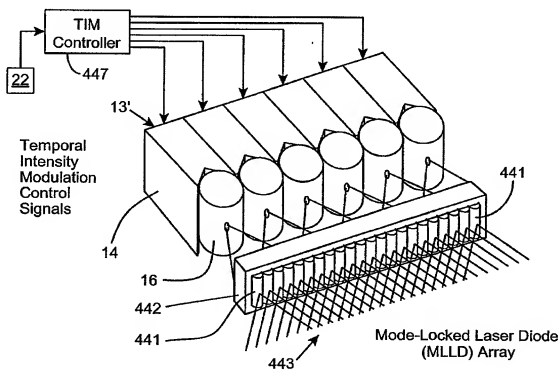
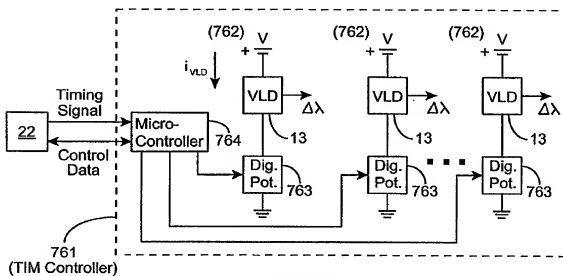
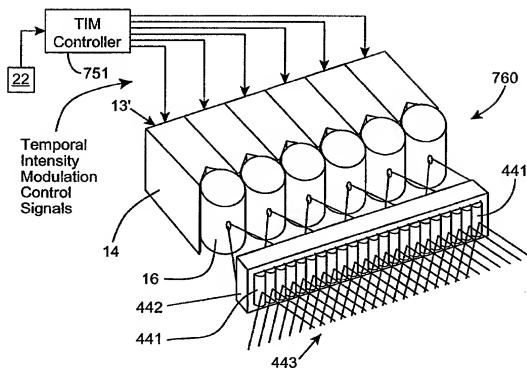


FIG. 1113B









10067140-081202

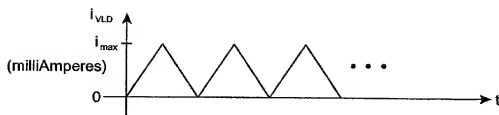


FIG. 1115E

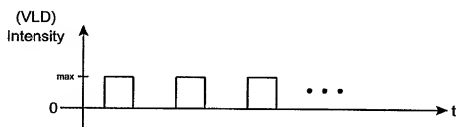


FIG. 1115F



Third Generalized Method Of
Reducing Speckle-Noise Patterns
At Image Detection Array
Of The IFD Subsystem (3)

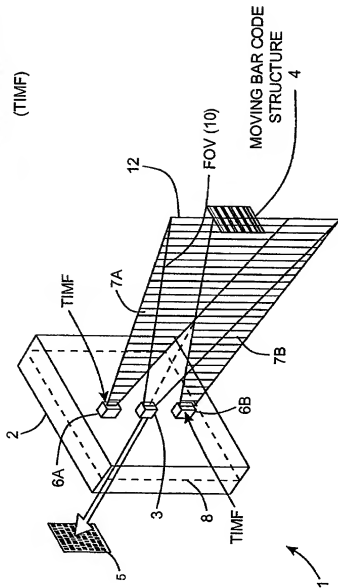


FIG. 1116



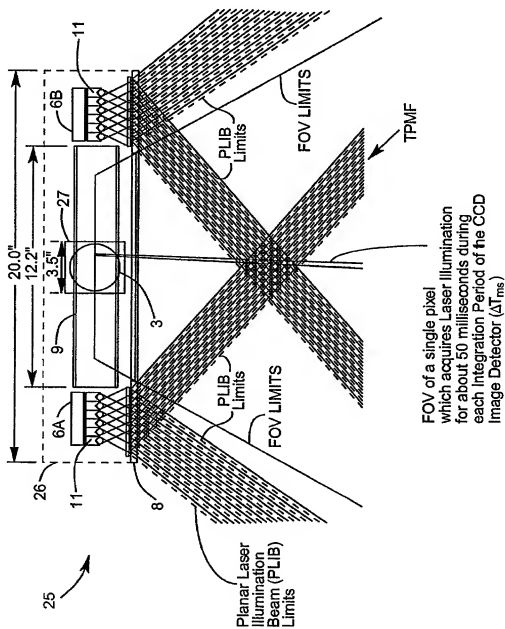


FIG. 116A



THE THIRD GENERALIZED SPECKLE-NOISE PATTERN REDUCTION
METHOD OF THE PRESENT INVENTION

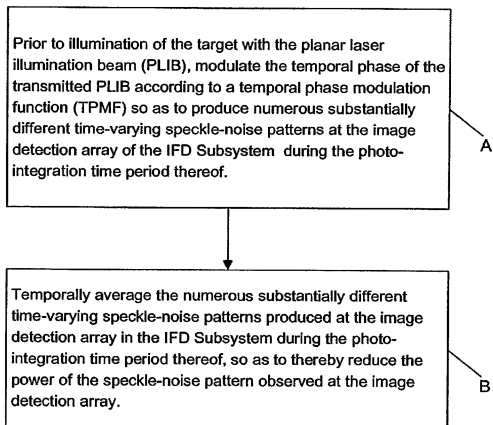
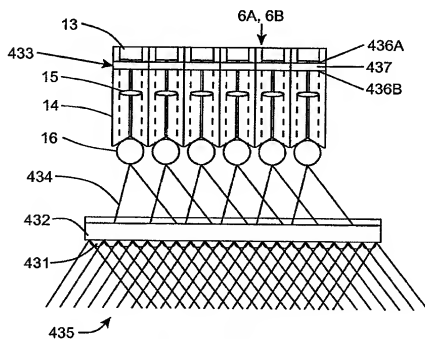
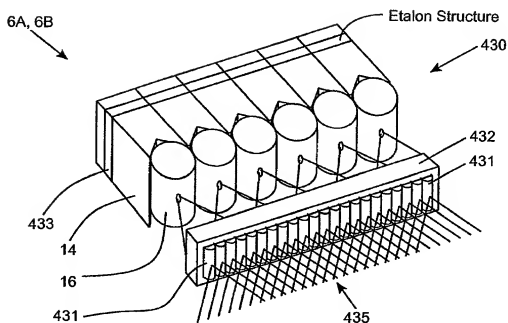


FIG. 1116B





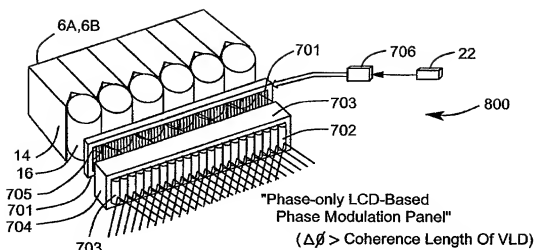


FIG. 1117C

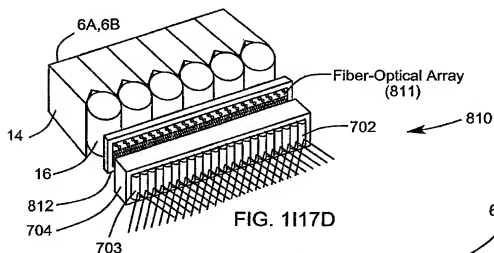


FIG. 1117D

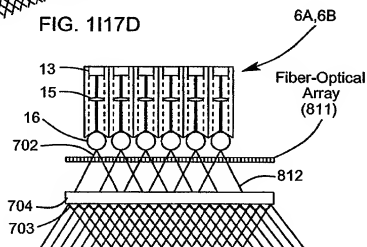
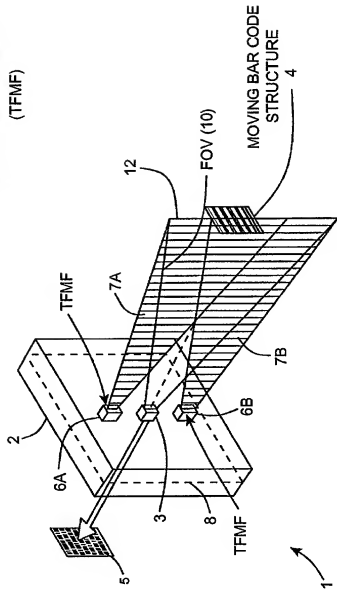


FIG. 1117E



Fourth Generalized Method Of
Reducing Speckle-Noise Patterns
At Image Detection Array
Of The IFD Subsystem (3)



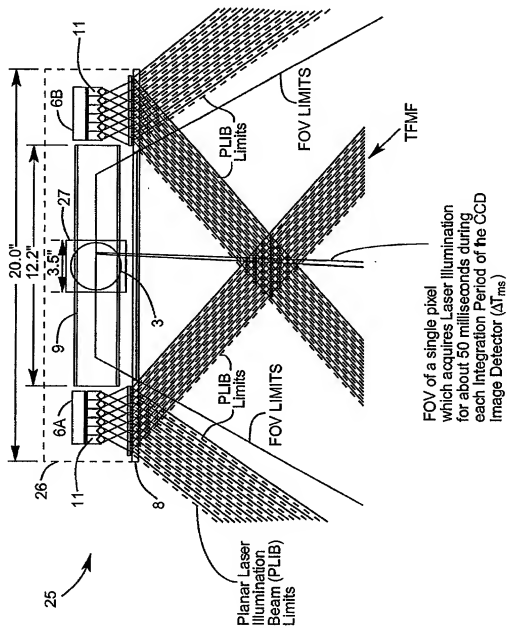


FIG. 1118A



THE FOURTH GENERALIZED SPECKLE-NOISE PATTERN REDUCTION
METHOD OF THE PRESENT INVENTION

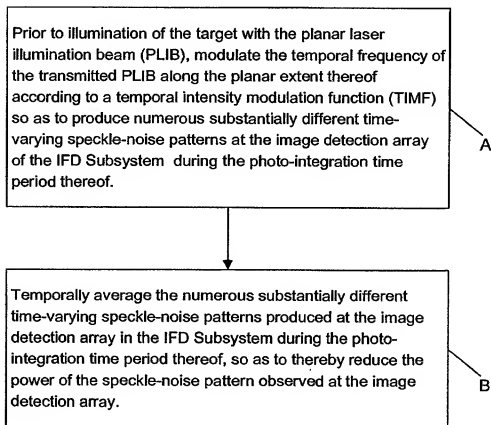
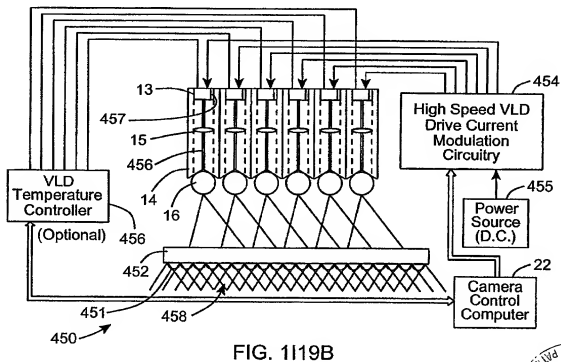
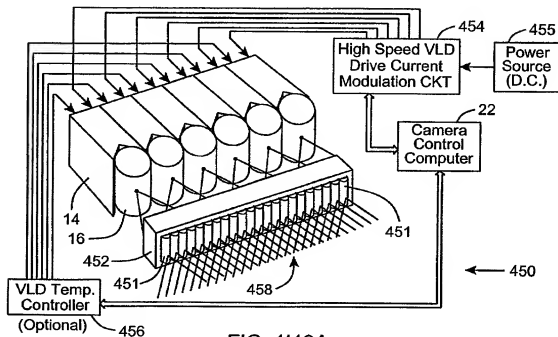


FIG. 1118B





10067140-081202

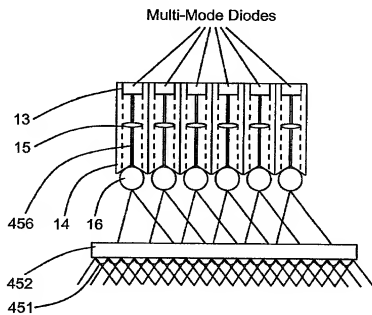


FIG. 1119C



Fifth Generalized Method Of
Reducing Speckle-Noise Patterns
At Image Detection Array
Of The IFD Subsystem (3)

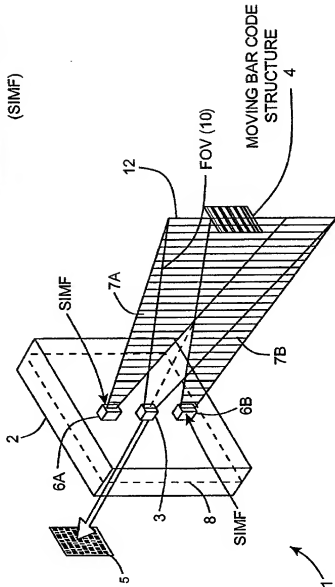


FIG. 1120



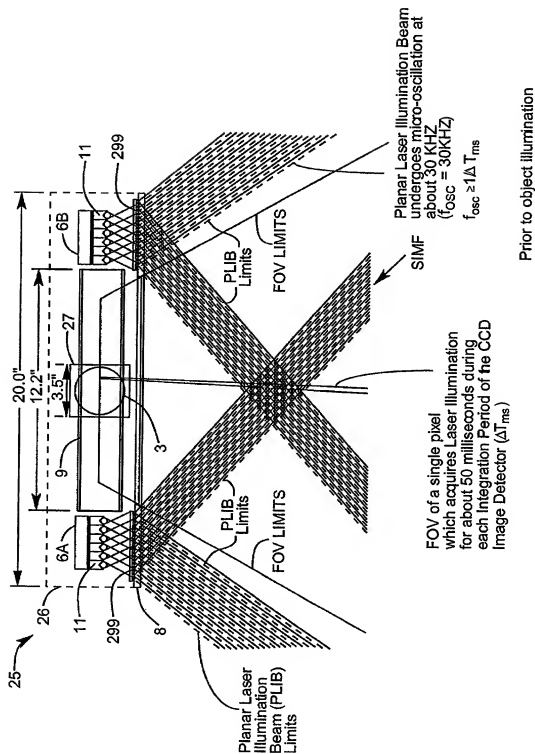


FIG. 1120A



THE FIFTH GENERALIZED SPECKLE-NOISE PATTERN REDUCTION
METHOD OF THE PRESENT INVENTION

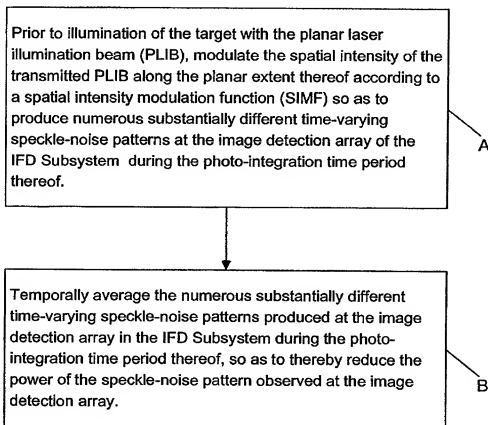
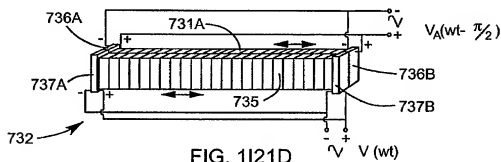
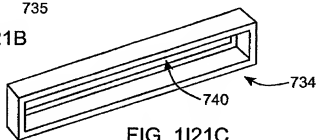
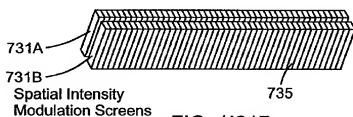
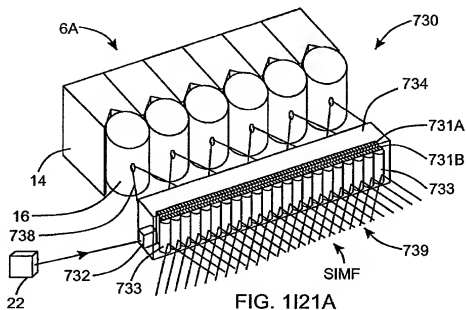


FIG. 1120B





Sixth Generalized Method Of
Reducing Speckle-Noise Patterns
At Image Detection Array
Of The IFD Subsystem (3)

(SIMF)

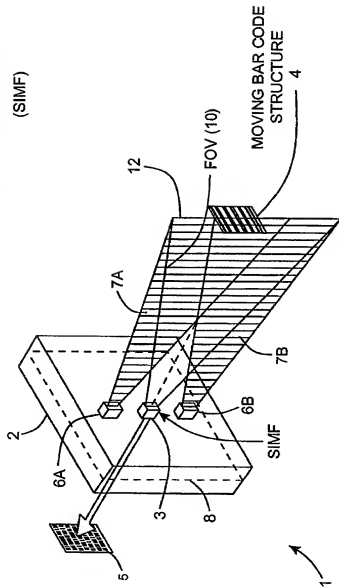


FIG. 1122



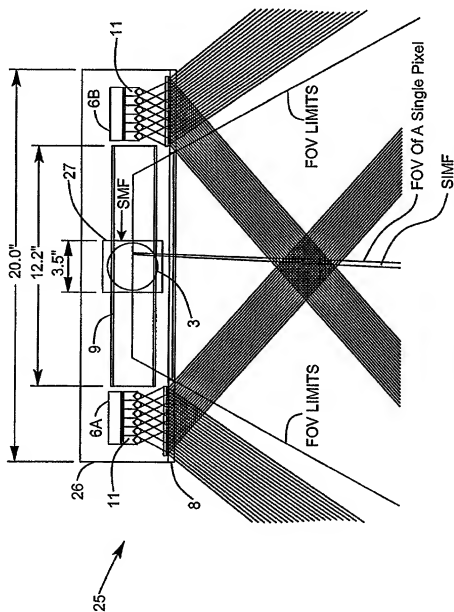


FIG. 1122A



2021001-011-0001

THE SIXTH GENERALIZED SPECKLE-NOISE PATTERN REDUCTION
METHOD OF THE PRESENT INVENTION

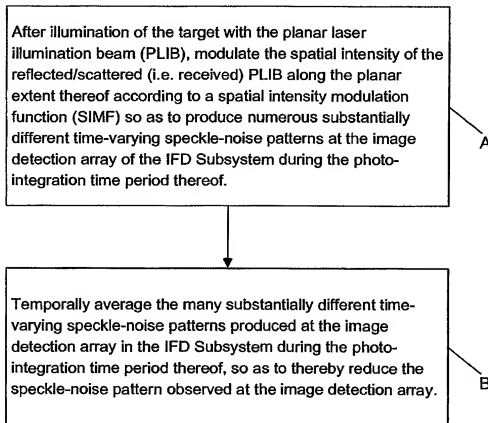
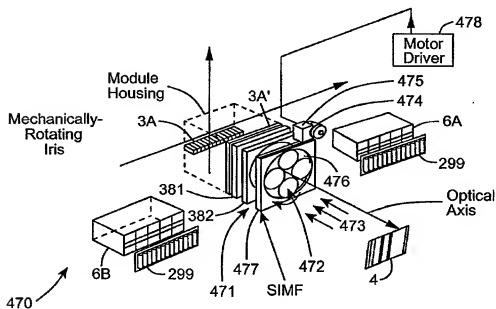
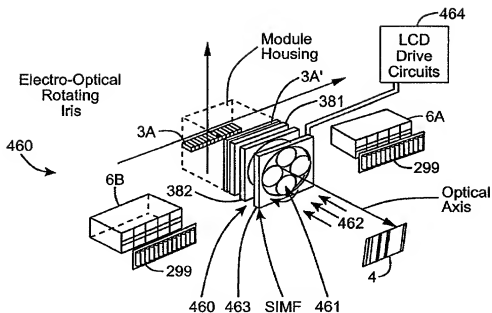


FIG. 1122B





Seventh Generalized Method Of
Reducing Speckle-Noise Patterns
At Image Detection Array
Of The IFD Subsystem (3)

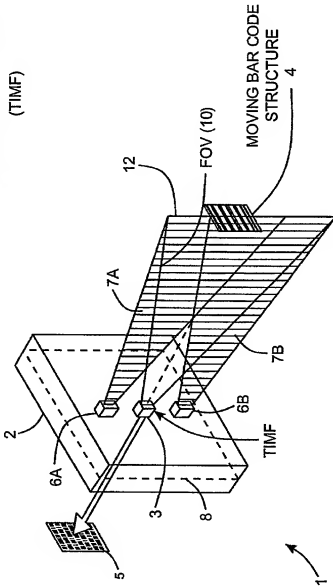


FIG. 1124



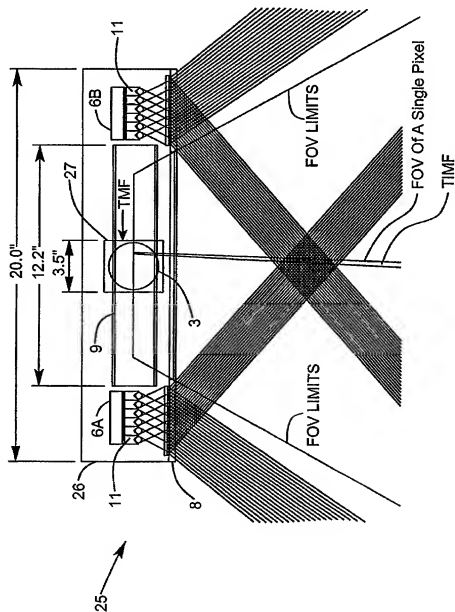


FIG. 1124A



THE SEVENTH GENERALIZED SPECKLE-NOISE PATTERN REDUCTION
METHOD OF THE PRESENT INVENTION

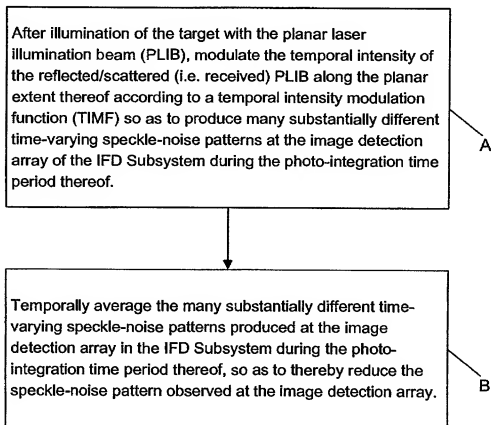


FIG. 1124B



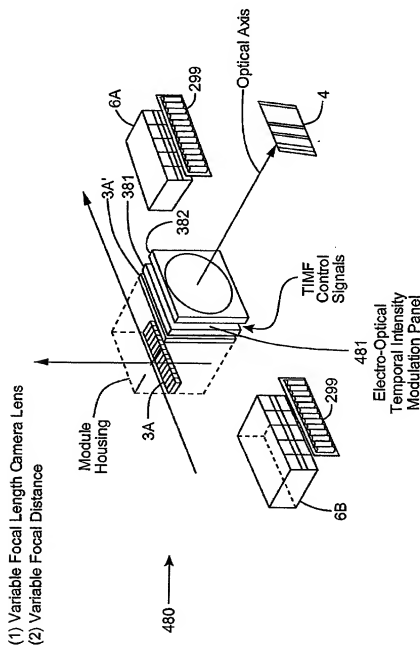


FIG. 1124C



2007140-001202

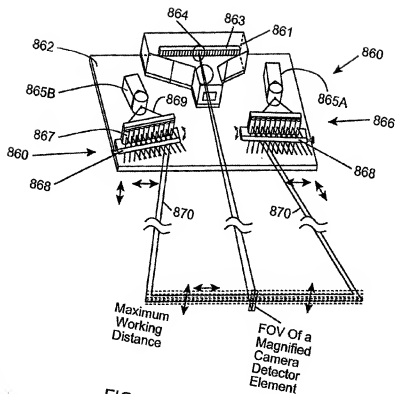


FIG. 1125A1

* Lateral And Transverse Micro-oscillation Of PLIB

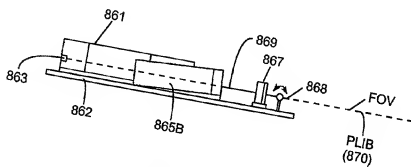


FIG. 1125A2



200700-0112907

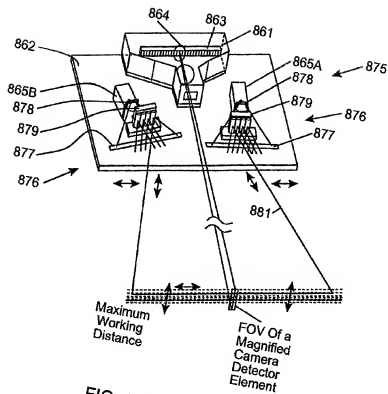


FIG. 1125B1

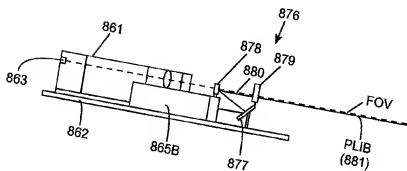


FIG. 1125B2



20067140-001202

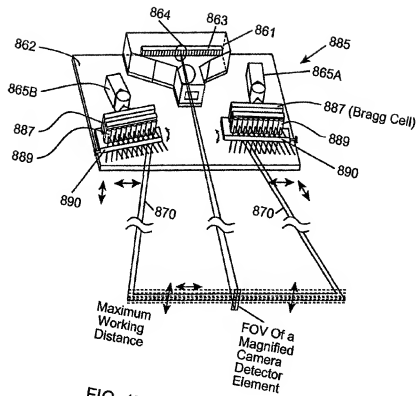


FIG. 1125C1

* Lateral And Transverse Micro-oscillation Of PLIB

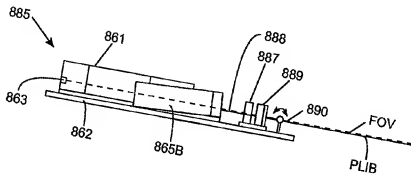


FIG. 1125C2



[illegible]

FIG. 1125D1

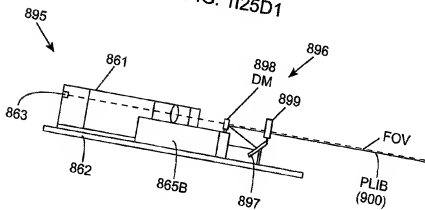


FIG. 1125D2



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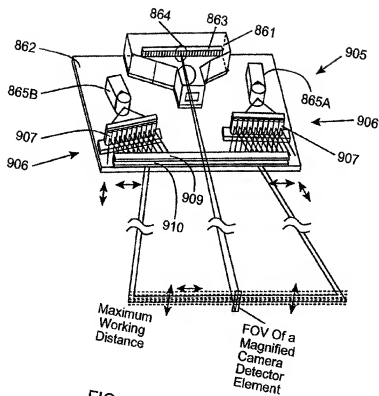


FIG. 1125E1

* Lateral And Transverse Micro-oscillation Of PLIB

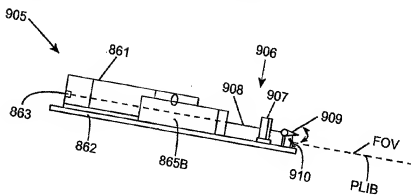


FIG. 1125E2



20250140.001202

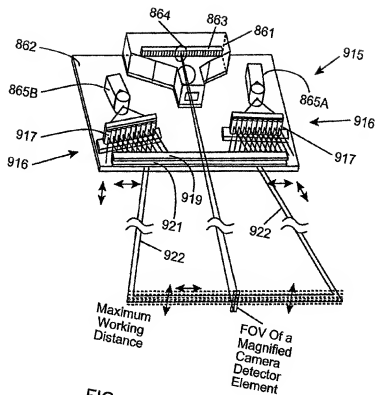


FIG. 1125F1

* Lateral And Transverse Micro-oscillation Of PLIB

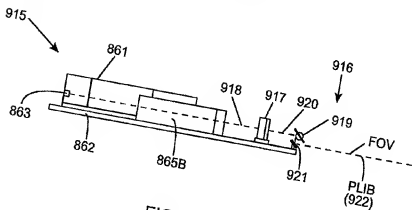


FIG. 1125F2



2007-08-04T12:00Z

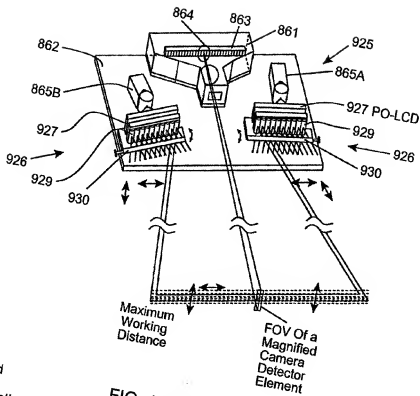


FIG. 1125G1

* Lateral And Transverse Micro-oscillation Of PLIB

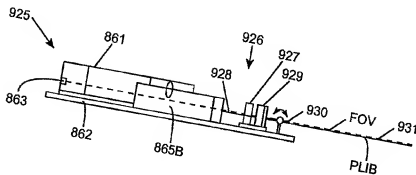


FIG. 1125G2



202700-0175001
10067340-001202

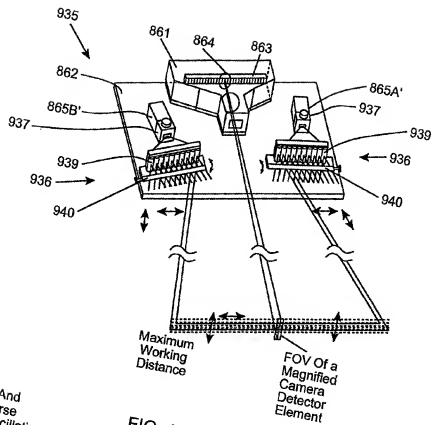


FIG. 1125H1

* Lateral And Transverse Micro-oscillation Of PLIB

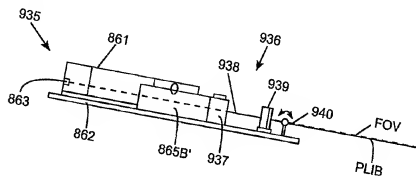
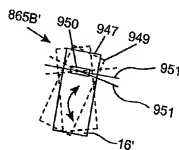
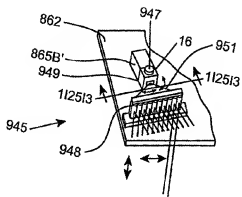
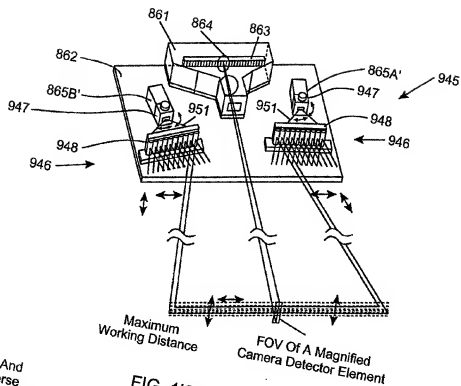


FIG. 1125H2



* Lateral And Transverse Micro-oscillation Of PLIB



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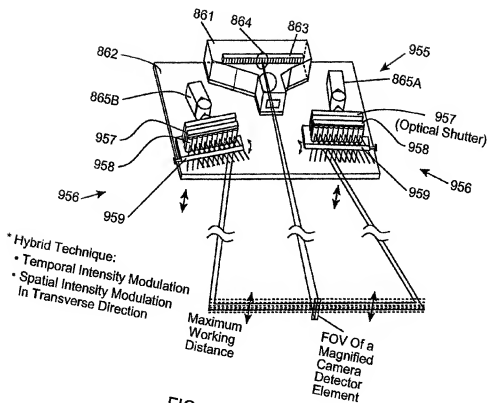


FIG. 1125J1

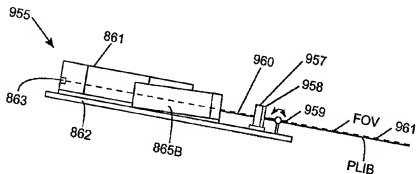


FIG. 1125J2



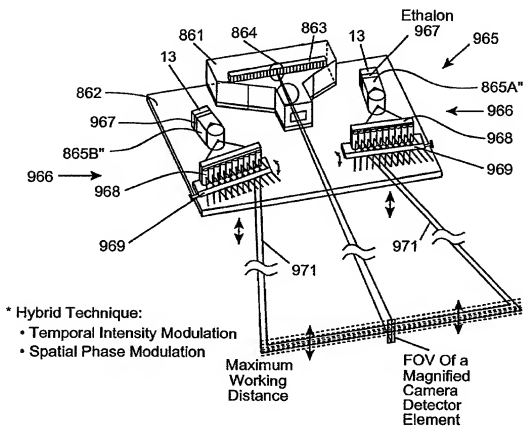


FIG. 1I25K1

* Transverse Micro-oscillation Of PLIB

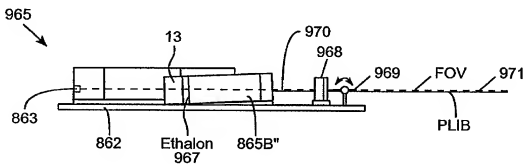
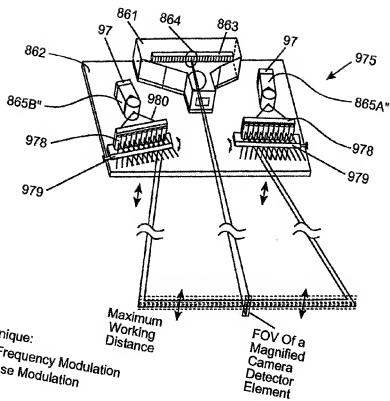


FIG. 1I25K2

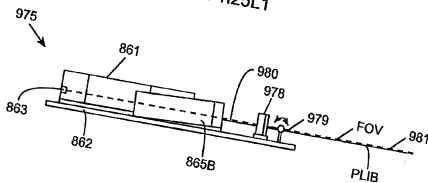


20067140-031202

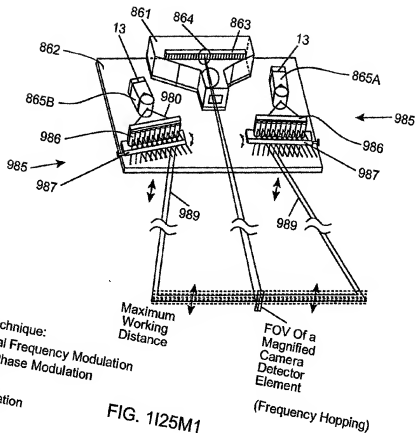


- * Hybrid Technique:
 - Temporal Frequency Modulation
 - Spatial Phase Modulation

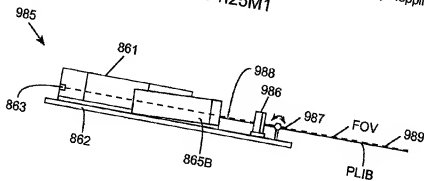
* Transverse Micro-oscillation Of PLIB



202780-0112007



- Hybrid Technique:
- Temporal Frequency Modulation
- Spatial Phase Modulation
- Transverse Micro-oscillation Of PLIB



2007007479007

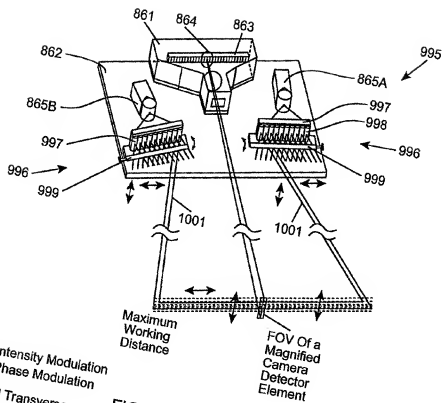


FIG. 1125N1

- * Hybrid:
 - Spatial Intensity Modulation
 - Spatial Phase Modulation
- * Lateral And Transverse Micro-oscillation Of PLIB

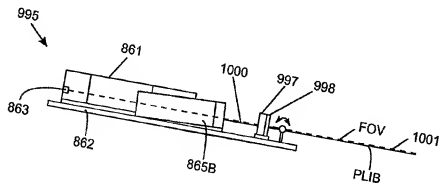


FIG. 1125N2



Fixed Focal Length
Lens Cases

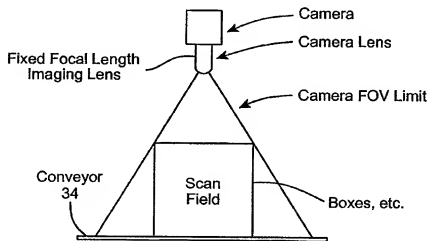


FIG. 1K1

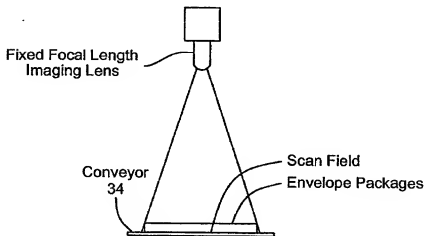


FIG. 1K2



1006740-084202

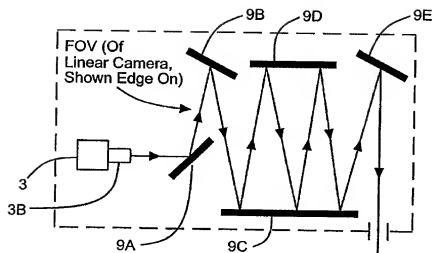


FIG. 1L1

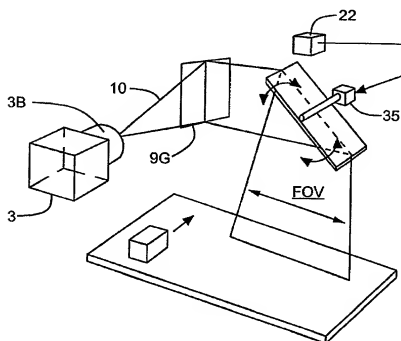


FIG. 1L2



202180-00129007

Pixel Power Density vs. Object Distance (General Example)

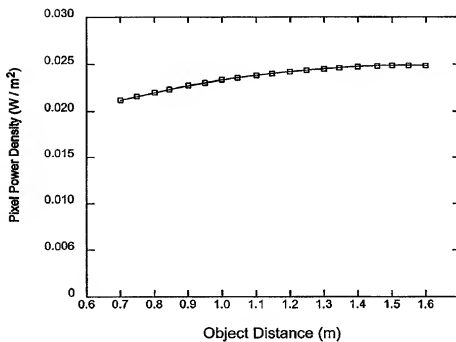


FIG. 1M1



202180-04129001

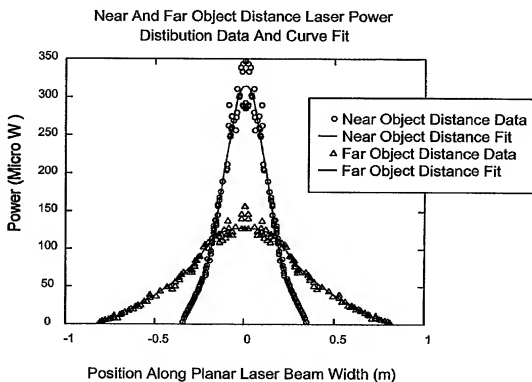


FIG. 1M2



202380-04129001

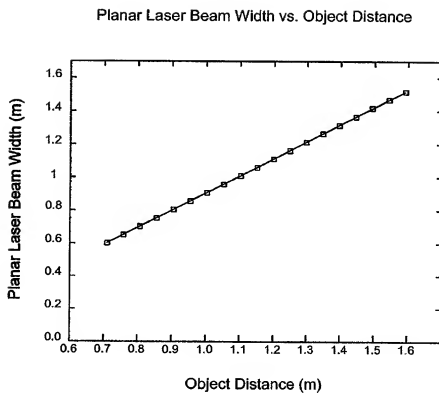


FIG. 1M3



202180-0472901

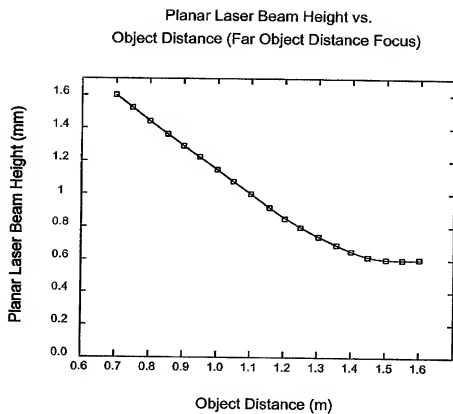


FIG. 1M4



202180-04129001

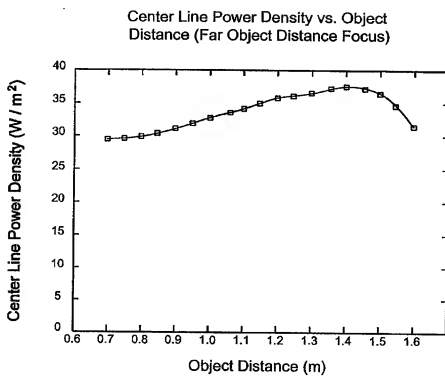


FIG. 1N



202180-04125001

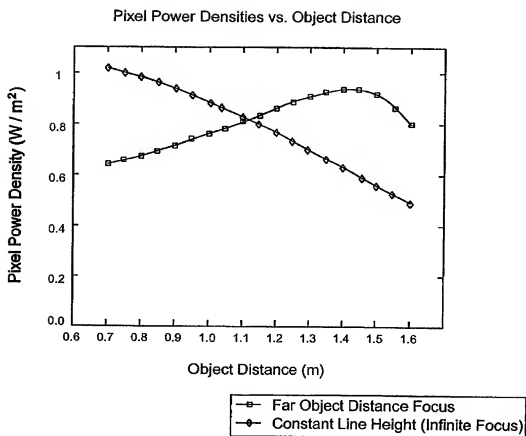


FIG. 10



202180-04129001

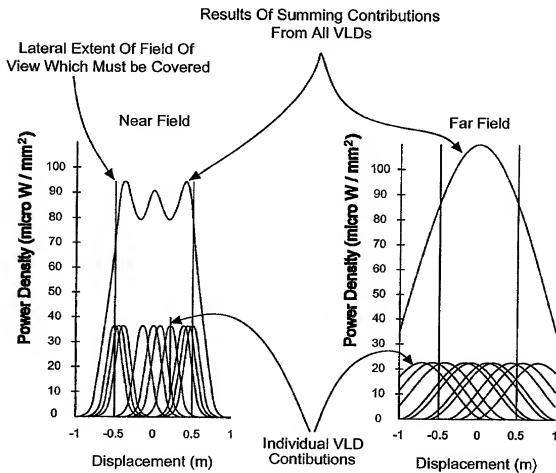


FIG. 1P1

FIG. 1P2



202180-047729007

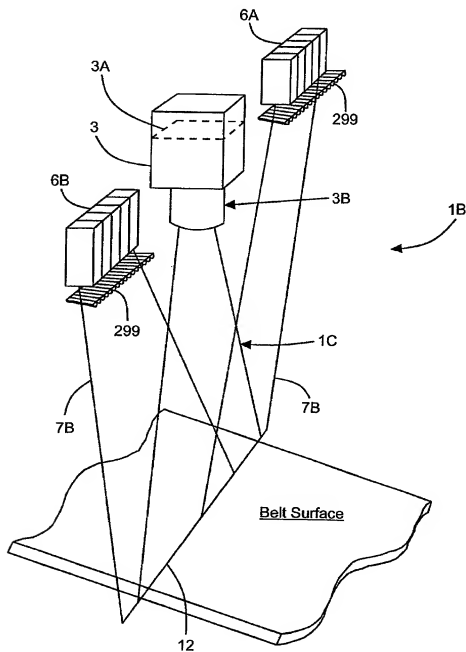


FIG. 1Q1



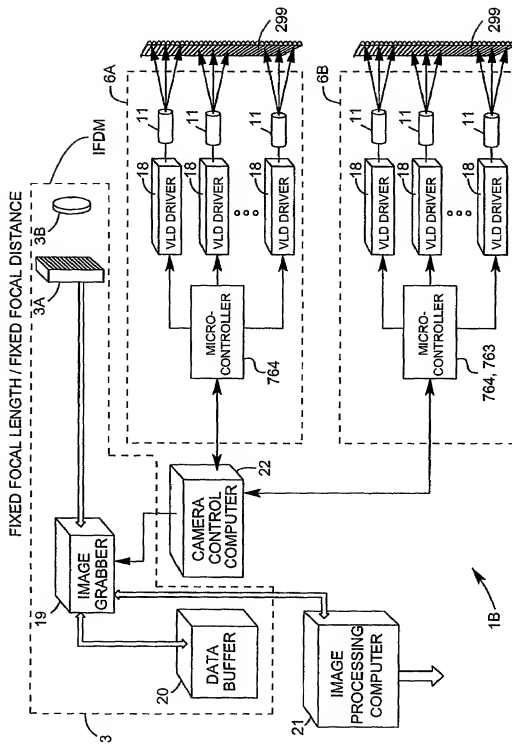


FIG. 1Q2



202180-0112002

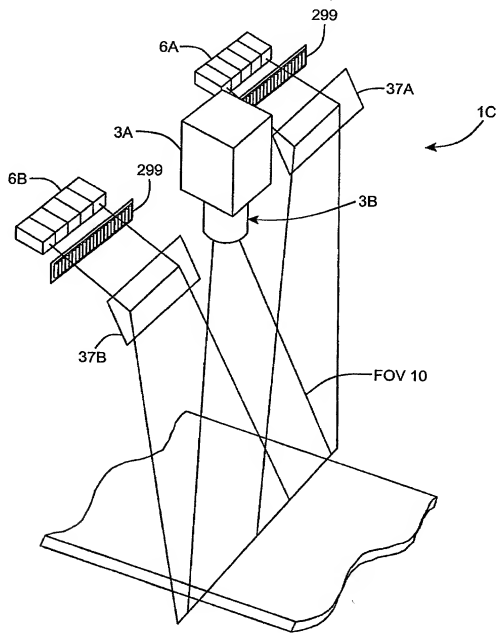


FIG. 1R1



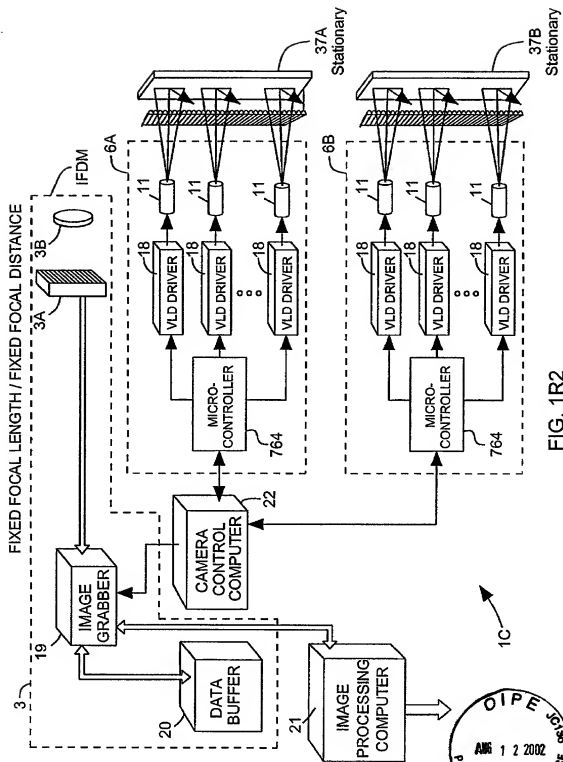


FIG. 1R2



[illegible]

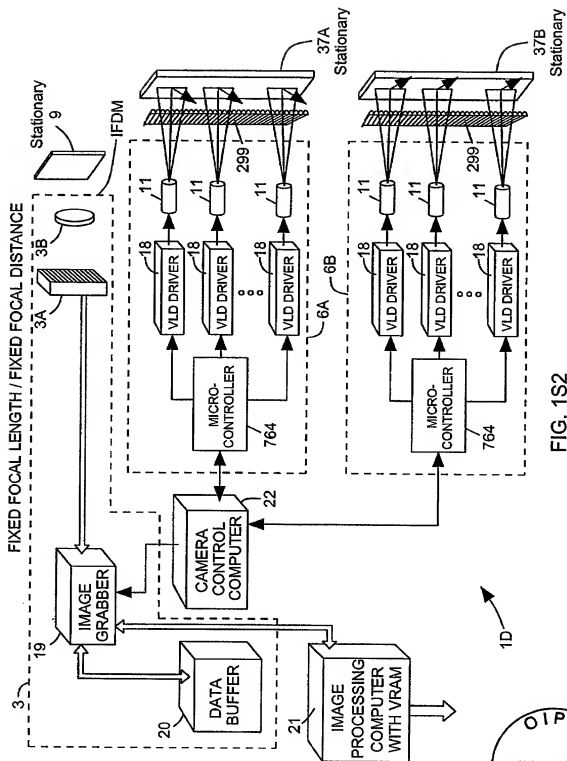


FIG. 1S2



10067140-081202

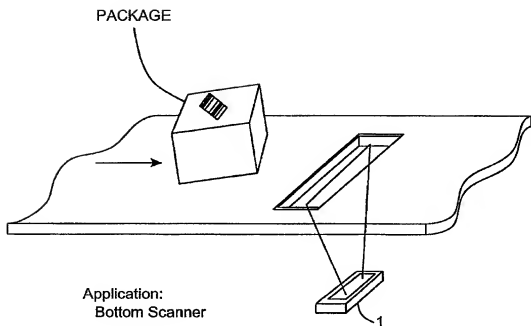
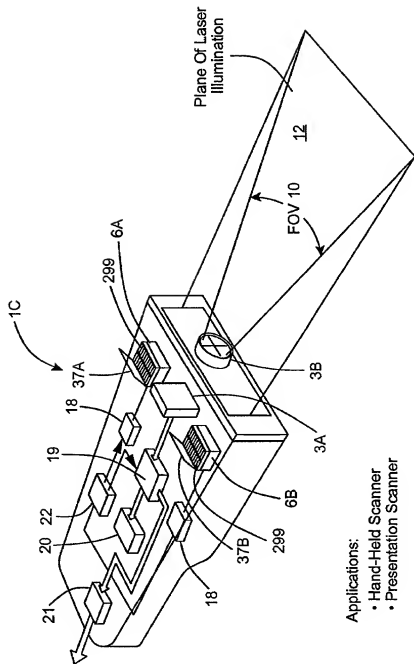


FIG. 1T





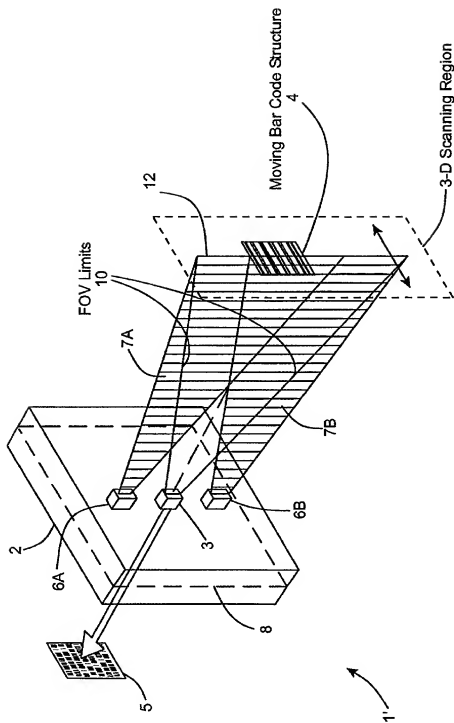


FIG. 1V1



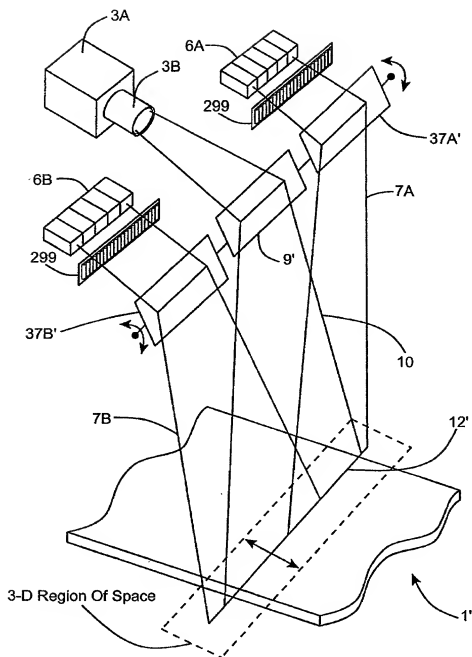


FIG. 1V2



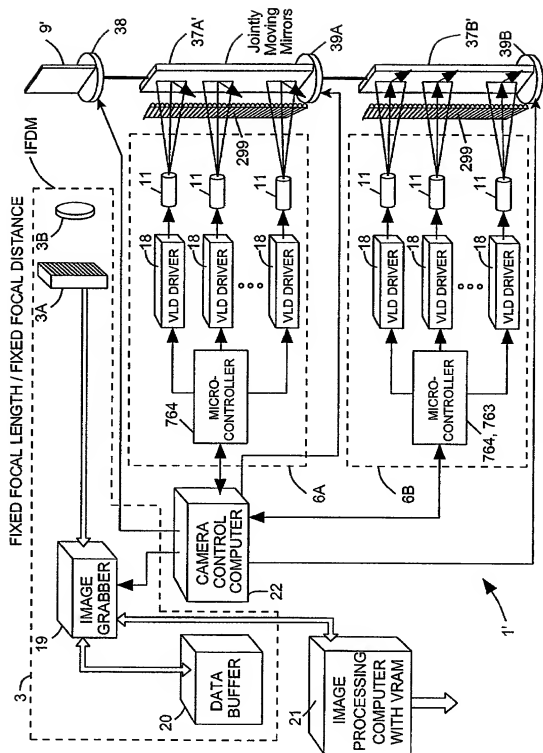
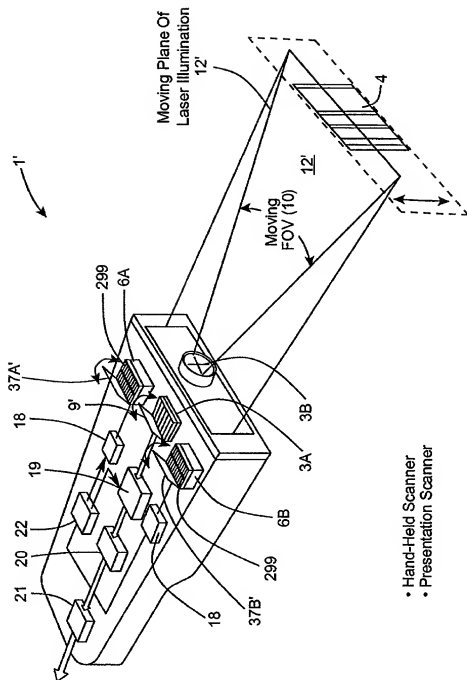
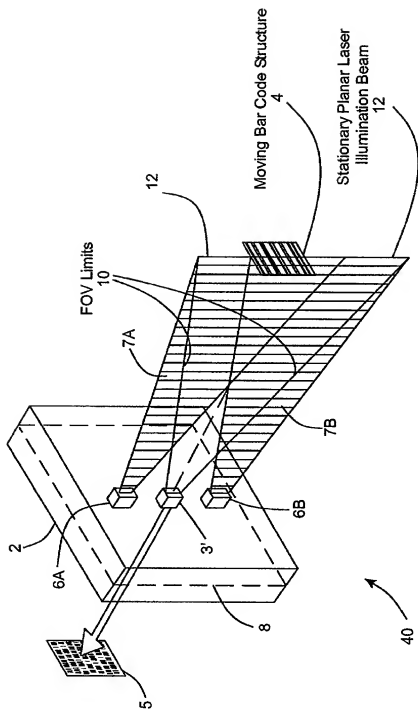


FIG. 1V3







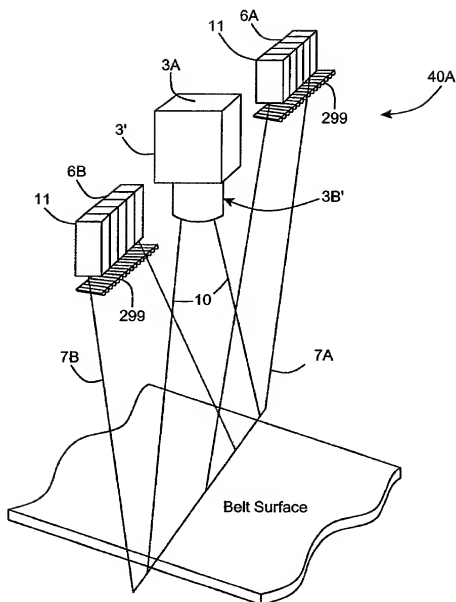


FIG. 2B1



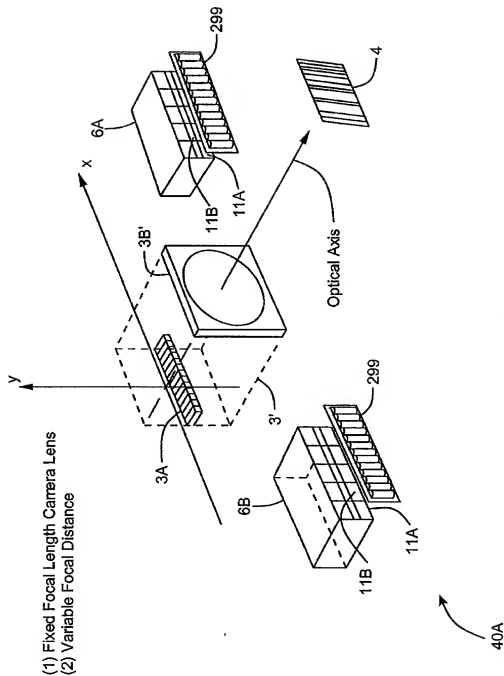


FIG. 2B2





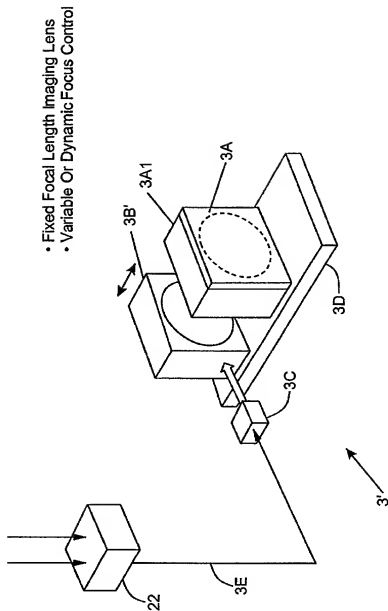


FIG. 2C2



202780-0412001

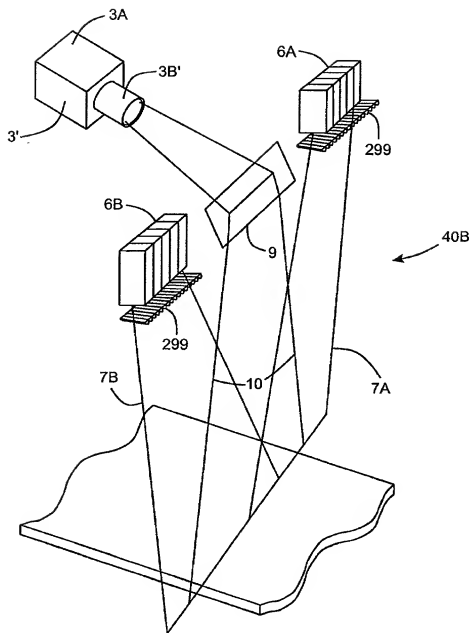


FIG. 2D1



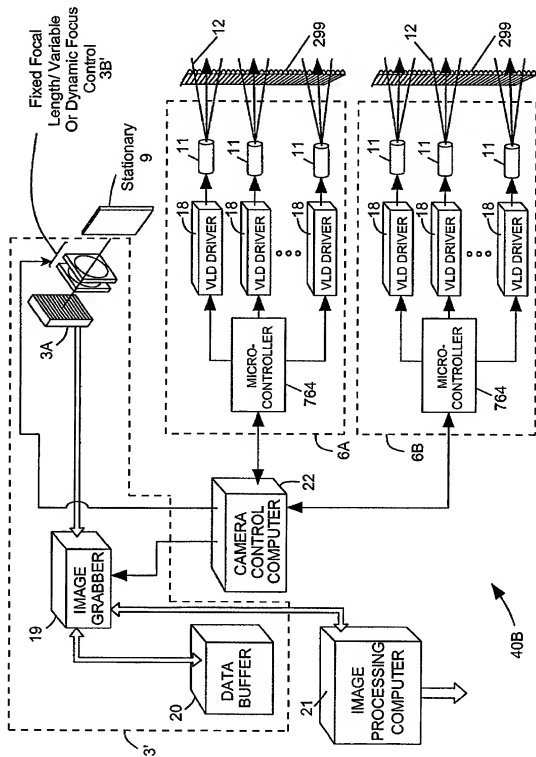


FIG. 2D2



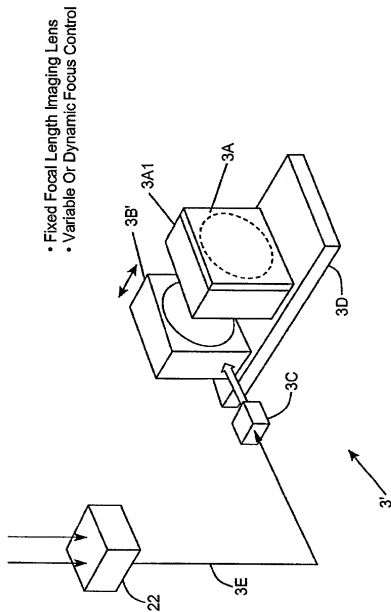
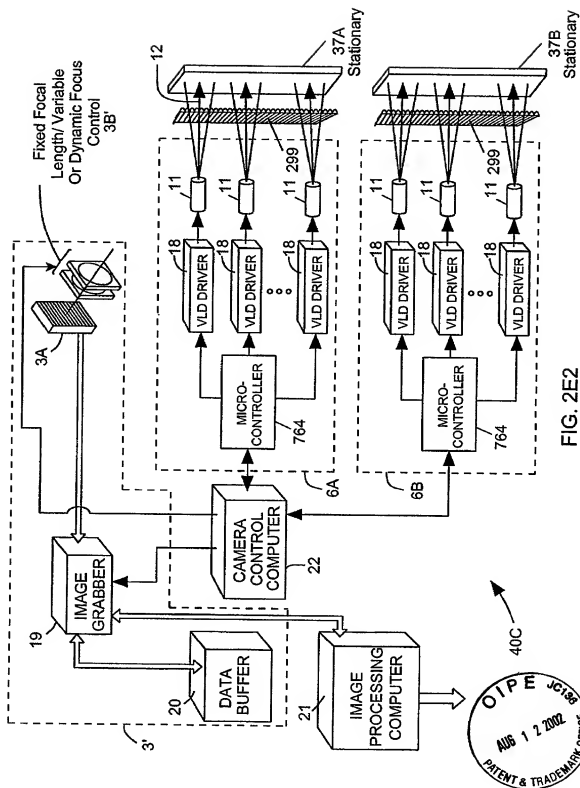


FIG. 2D3





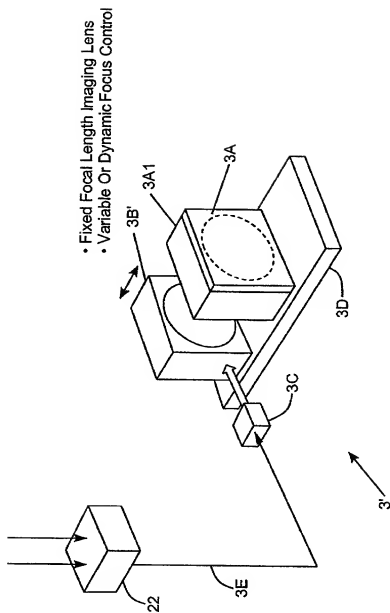


FIG. 2E3



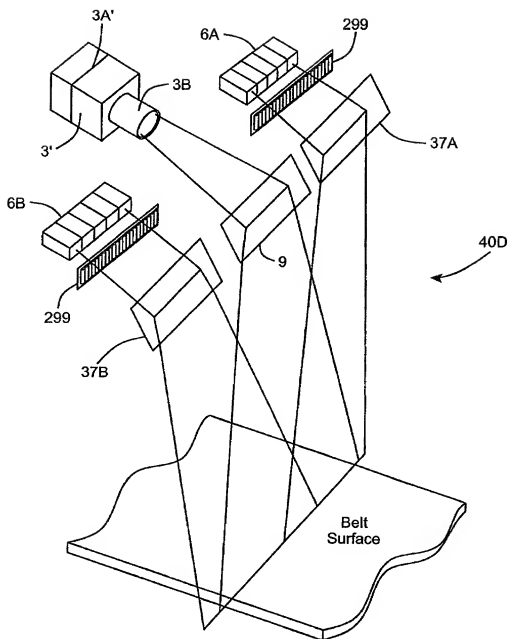


FIG. 2F1



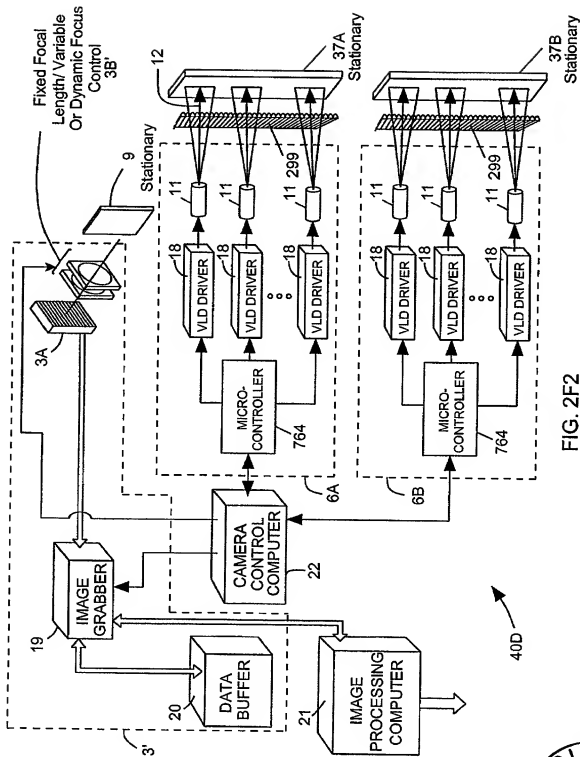


FIG. 2F2



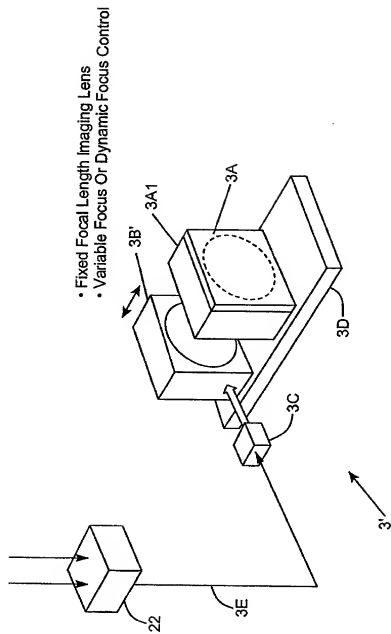


FIG. 2F3



10067140-081202

Top Conveyor Scanner:

- Fixed Focal Length Imaging Lens
- Variable Focal Distance Control

Side Conveyor Scanner:

- Fixed Focal Length Imaging Lens
- Dynamic Focal Distance Control

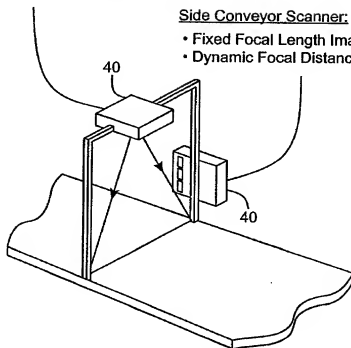


FIG. 2G



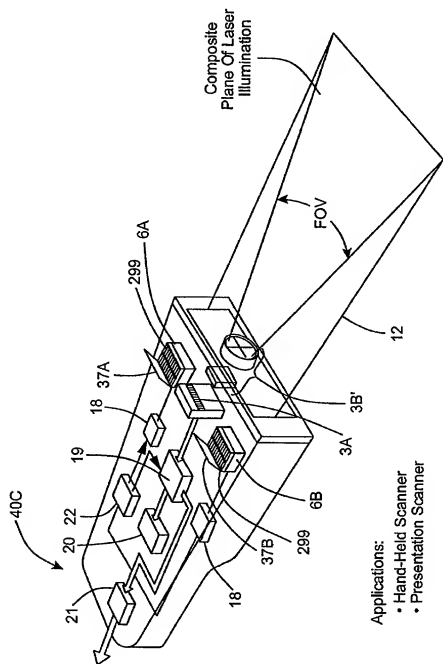


FIG. 2H



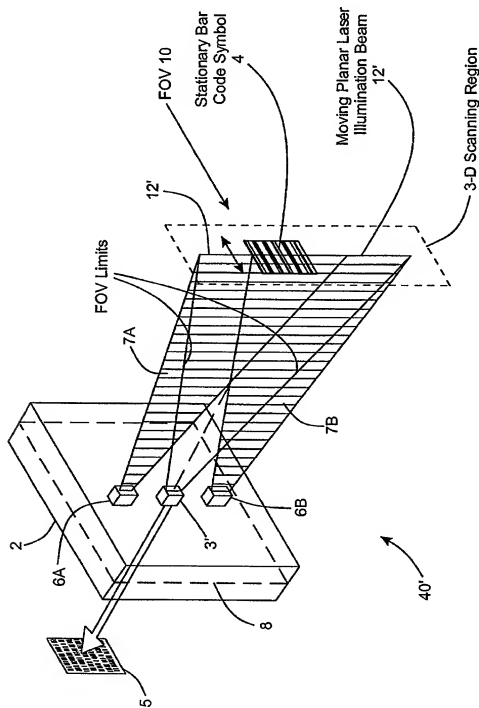


FIG. 211



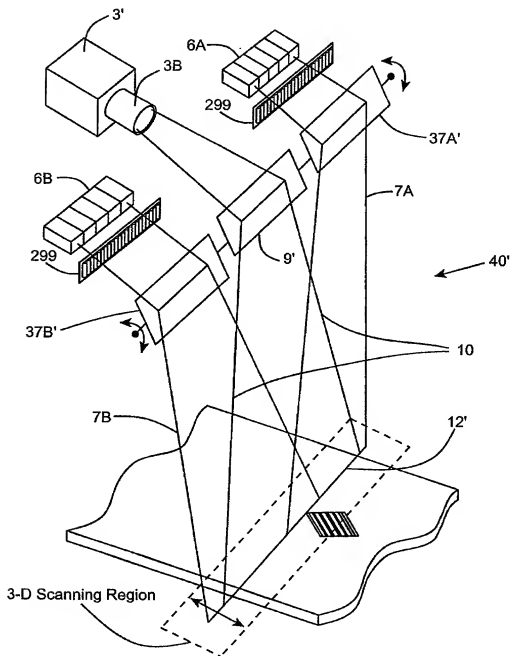


FIG. 212



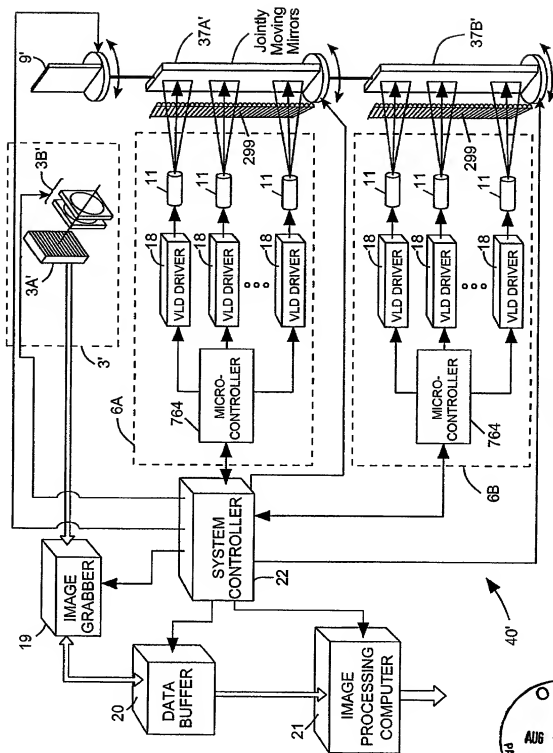


FIG. 213



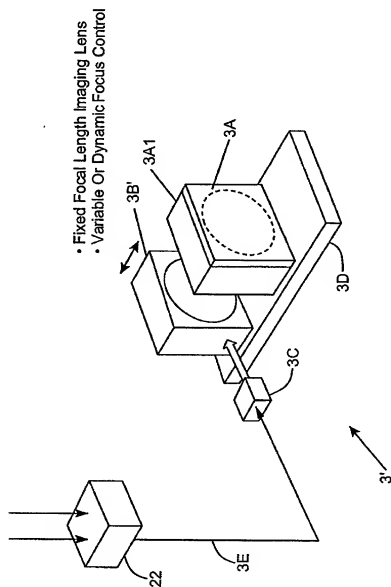


FIG. 214



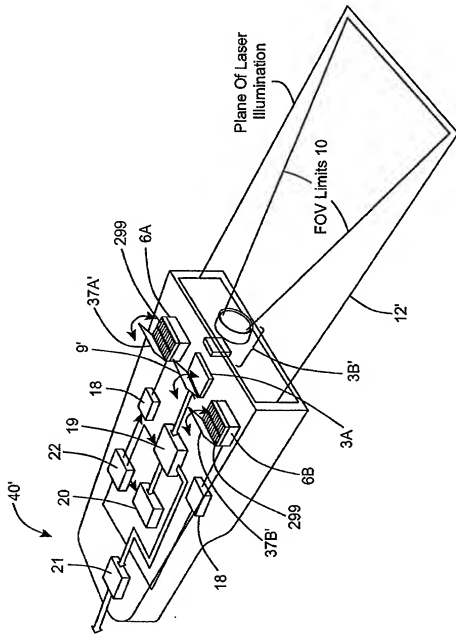


FIG. 215



202180-04125001

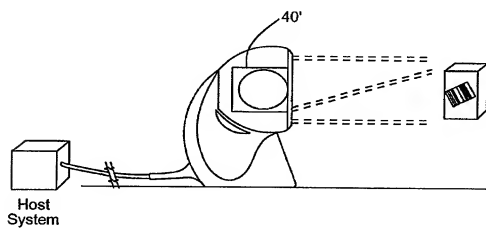


FIG. 216



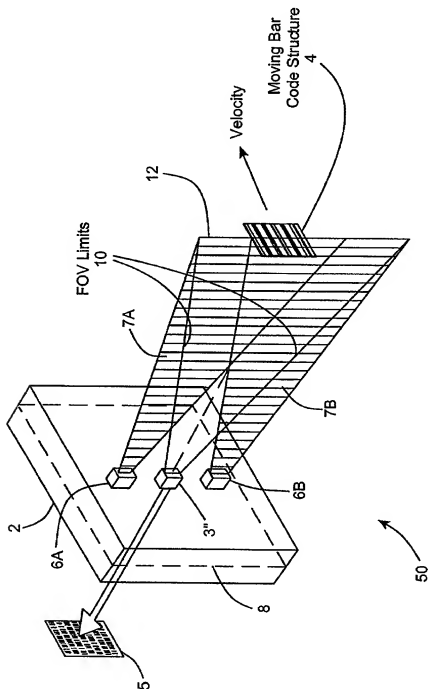


FIG. 3A



202180-04129001

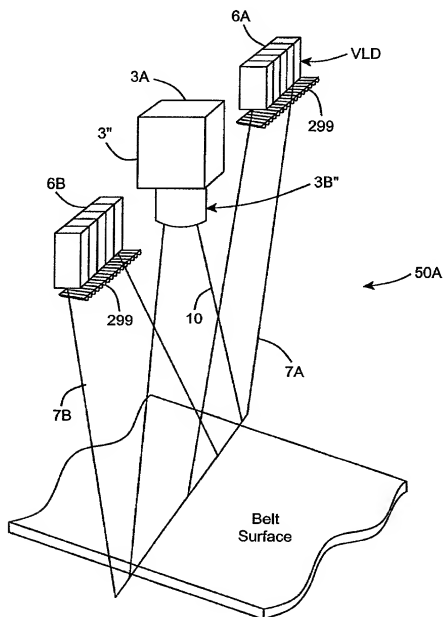


FIG. 3B1



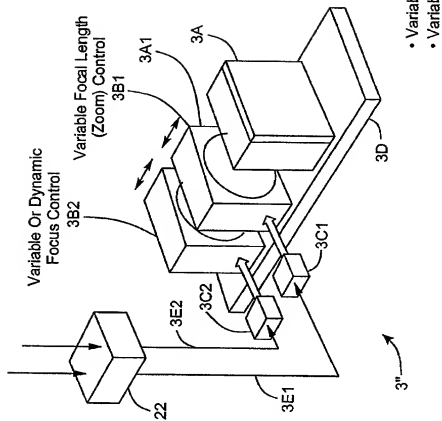
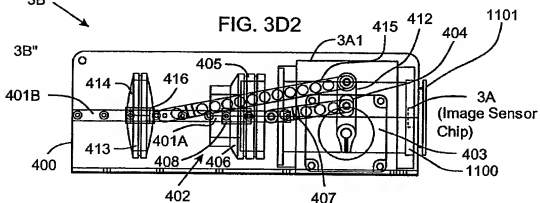
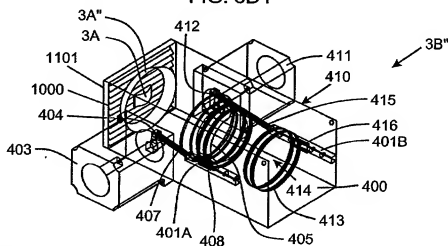
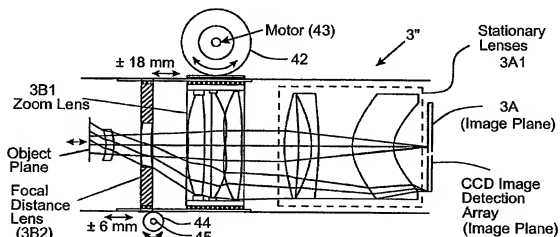


FIG. 3C2





202180-04129001

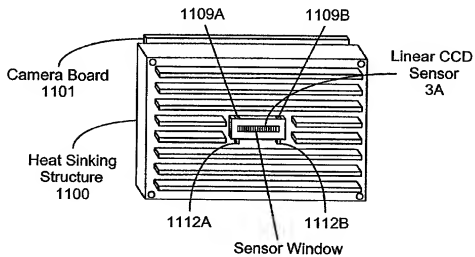


FIG. 3D4

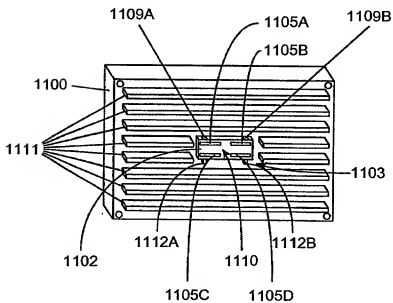


FIG. 3D5



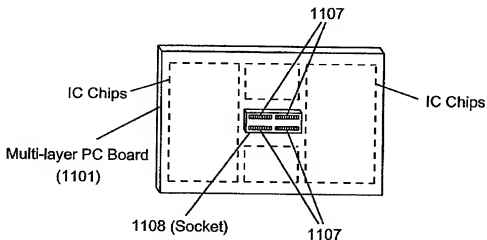


FIG. 3D6

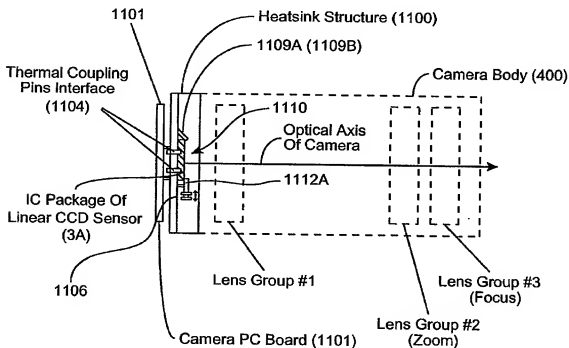


FIG. 3D7



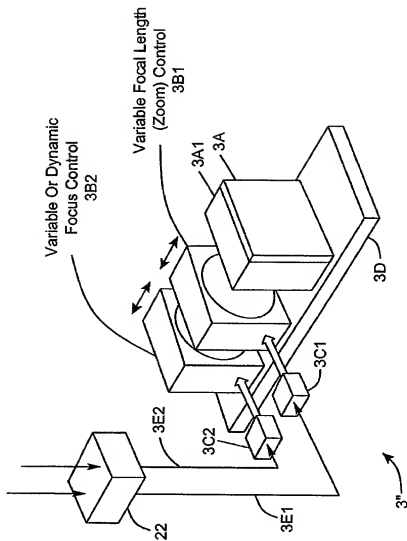


FIG. 3E3



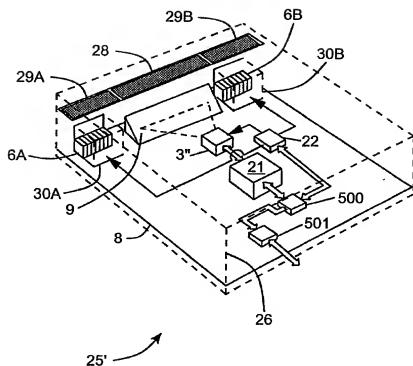


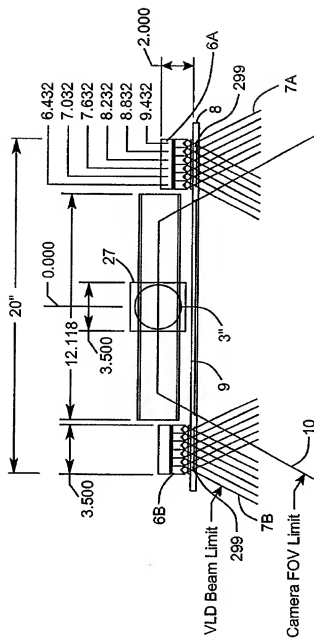
FIG. 3E4



A schematic diagram of a video camera system 25'. The system is shown in a perspective view, revealing its internal components. The overall dimensions are 21.750" in width and 19.749" in height. The system includes a lens assembly 9 at the front, which is part of a larger housing 8. The lens assembly 9 is flanked by two vertical sections, 30A and 30B, which are part of a larger structure 6. The lens assembly 9 is mounted on a base 10. The lens assembly 9 is connected to a CCD sensor 21, which is connected to an image processor 21. The image processor 21 is connected to a control unit 500, which is connected to a video output unit 501. The control unit 500 is also connected to a power supply unit 22. The system is labeled with various components: 25' (the entire system), 8 (the housing), 9 (the lens assembly), 10 (the base), 21 (the image processor), 22 (the power supply), 500 (the control unit), 501 (the video output unit), 6A and 6B (the top and bottom sections of the housing), 30A and 30B (the side sections of the housing), and 3" (a dimension indicating the distance between the lens assembly and the base). The diagram also shows the "CCD FOV Limit" and "VLD Beam Limits".

FIG. 3E5





202180-01/2002

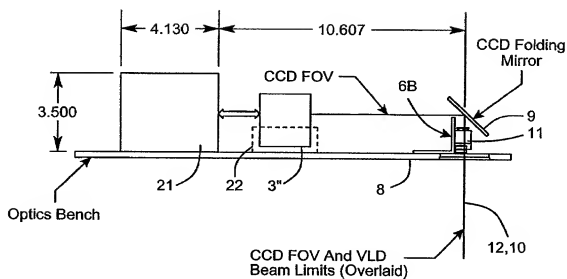


FIG. 3E7



10067149-084202
202180-0172001

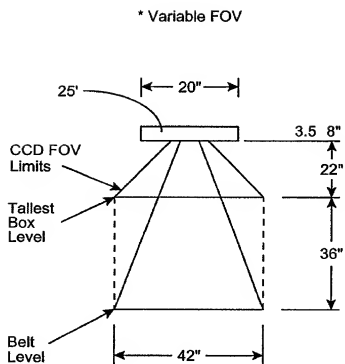


FIG. 3E8



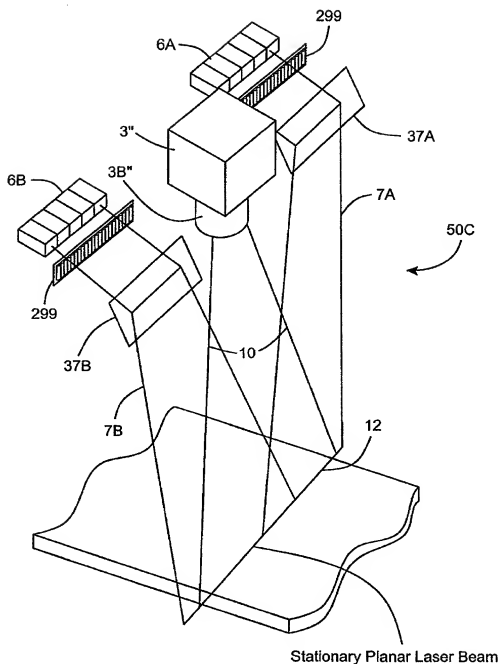


FIG. 3F1



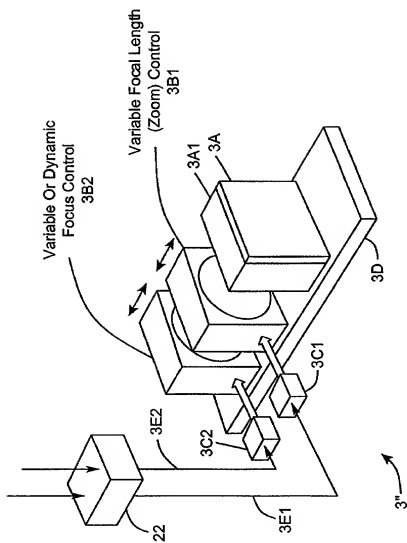
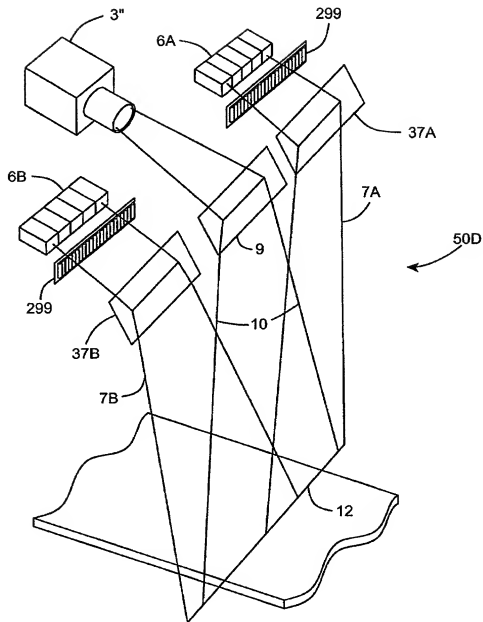


FIG. 3F3



202180-0472001



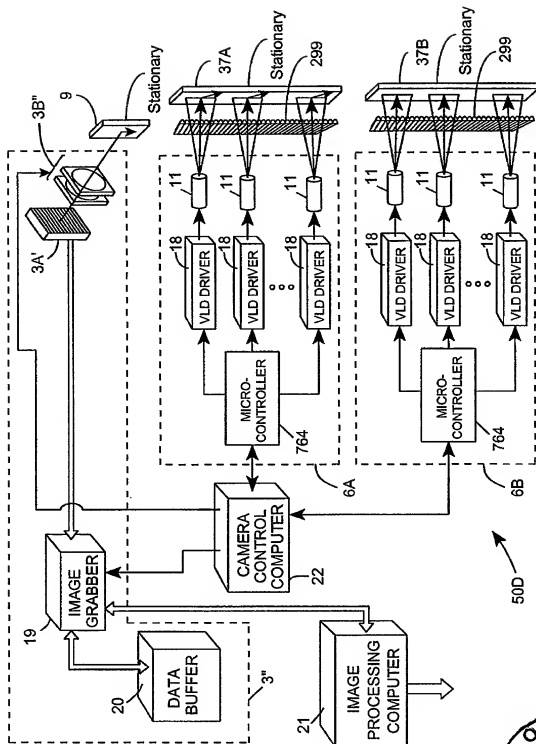


FIG. 3G2



2023070425001

- Variable Focal Length Imaging Lens
- Variable Focal Distance

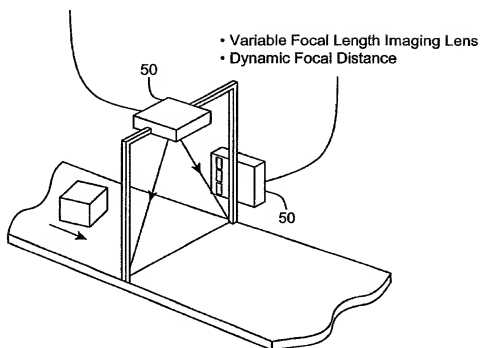


FIG. 3H



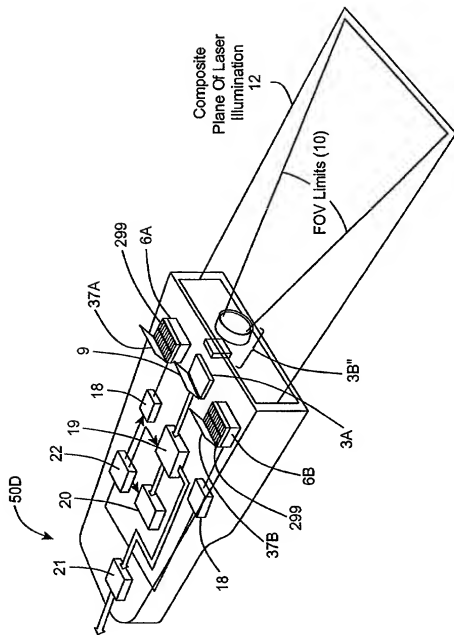
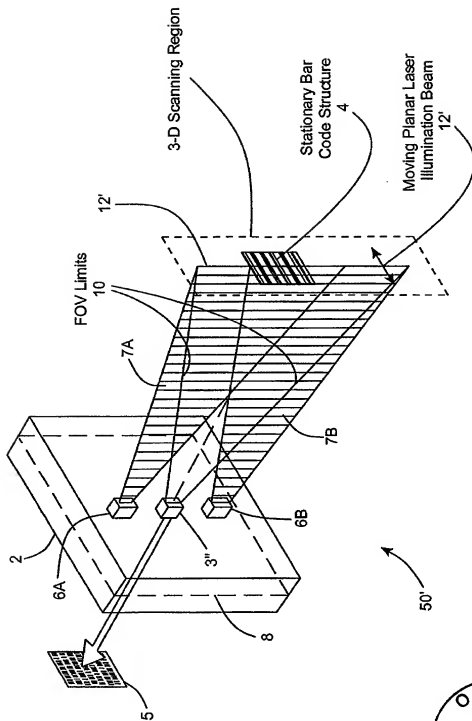
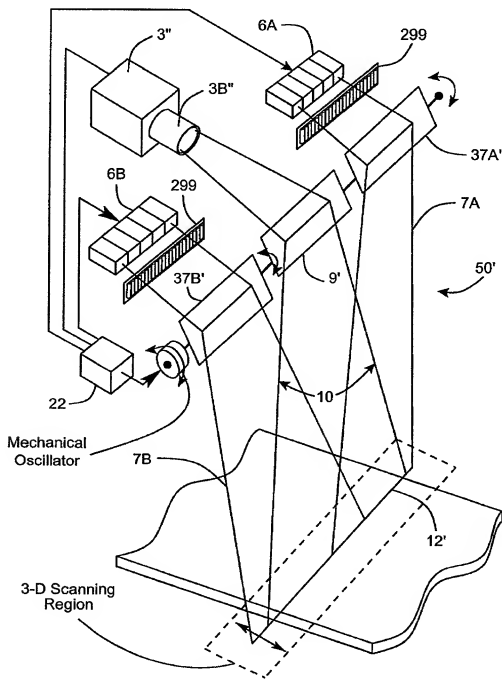


FIG. 31





10067140-081202



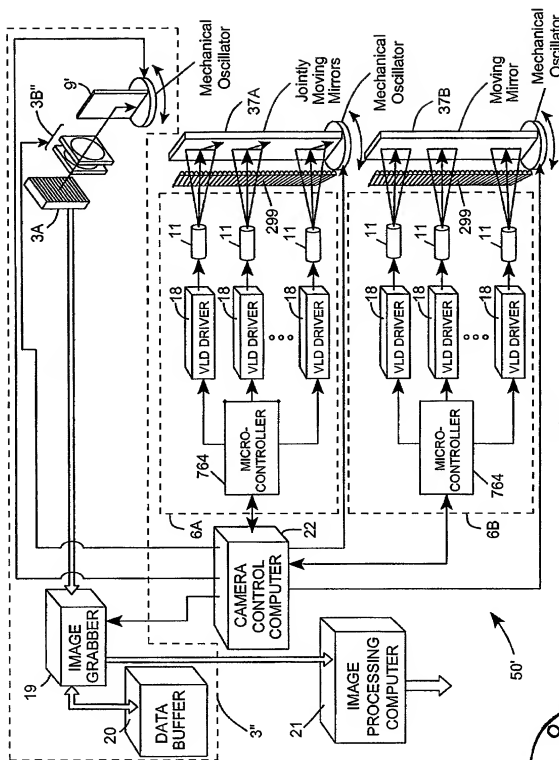


FIG. 3J3



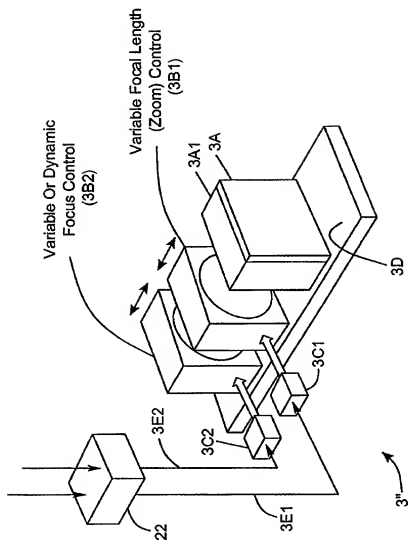
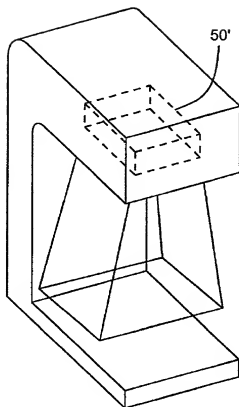


FIG. 3J4



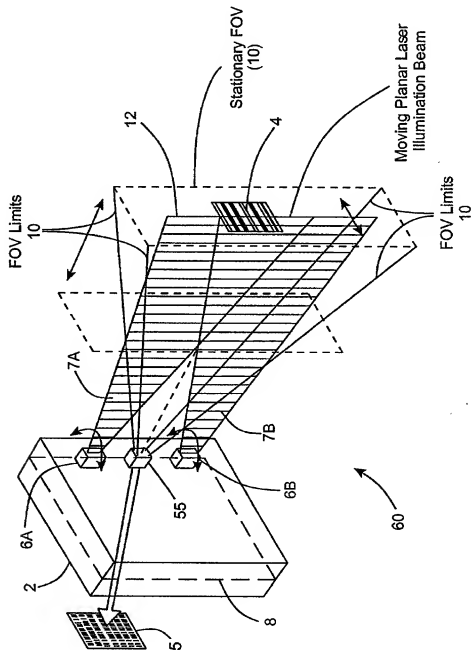
1067440-081202



2-D Hold-under Scanner

FIG. 3J6





202180-04729001

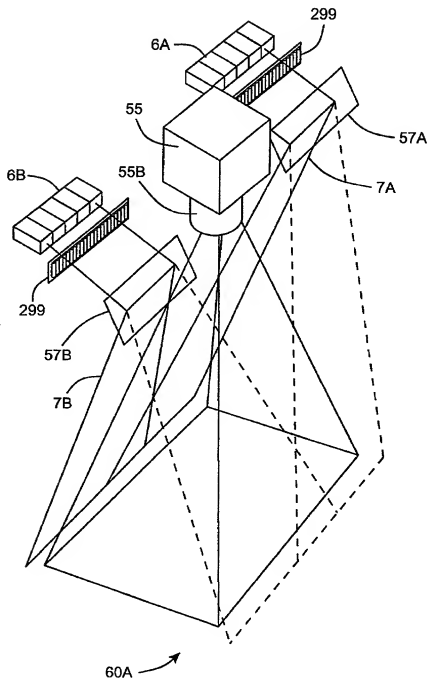


FIG. 4B1



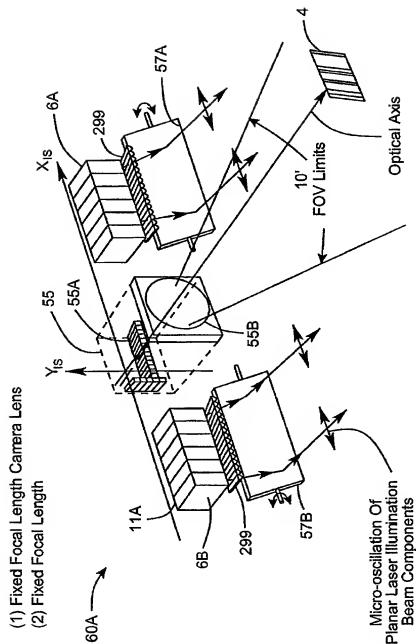


FIG. 4B2



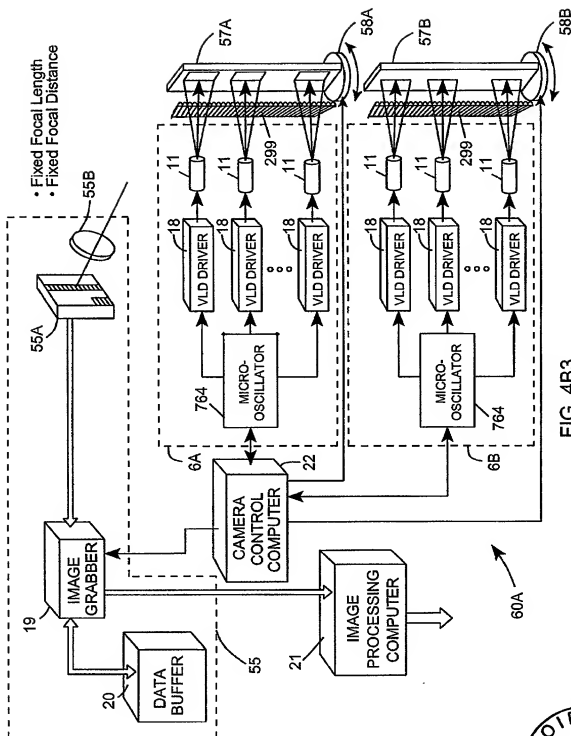


FIG. 4B3



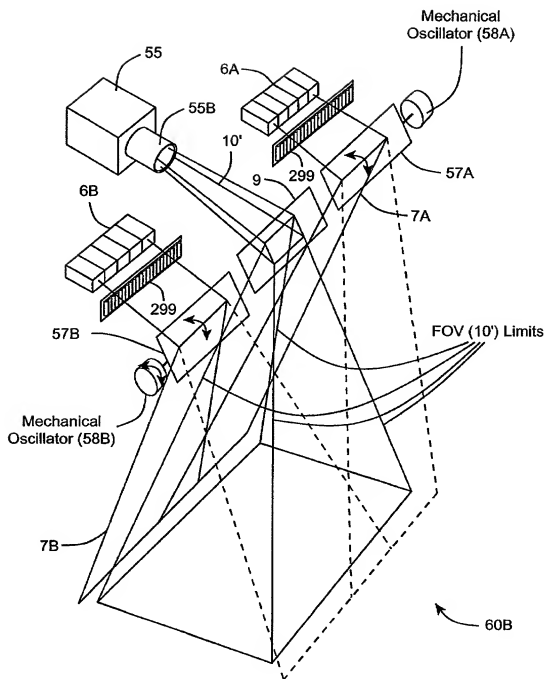


FIG. 4C1



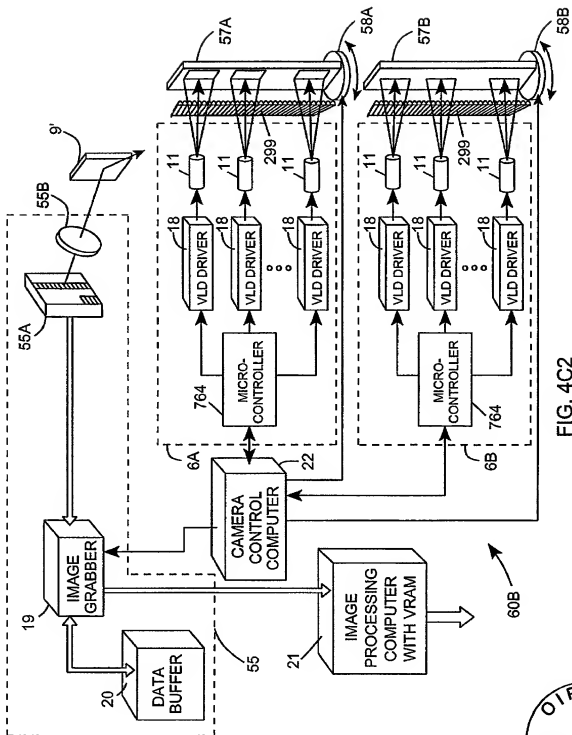
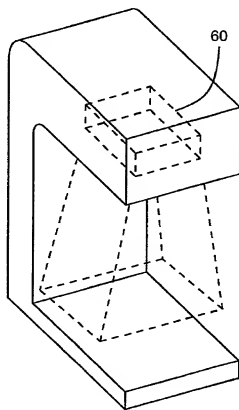


FIG. 4C2



10057140-081202



2-D Hold-under Scanner

FIG. 4D



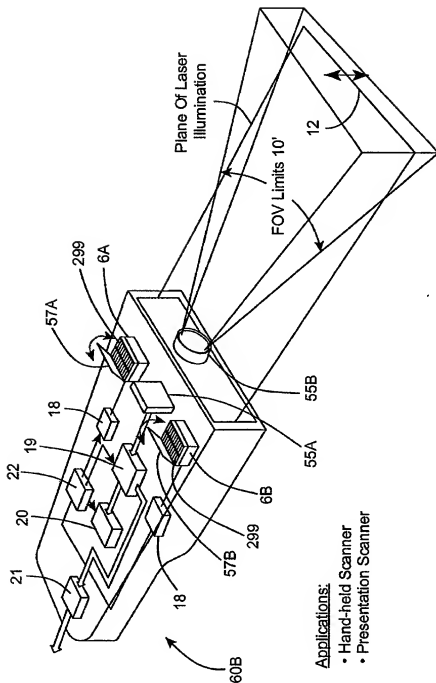


FIG. 4E



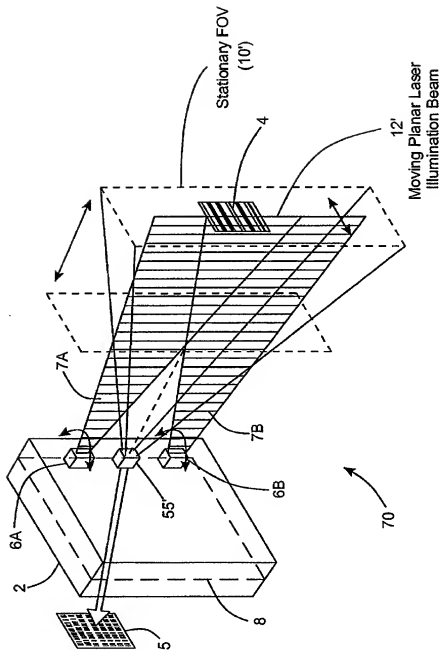


FIG. 5A



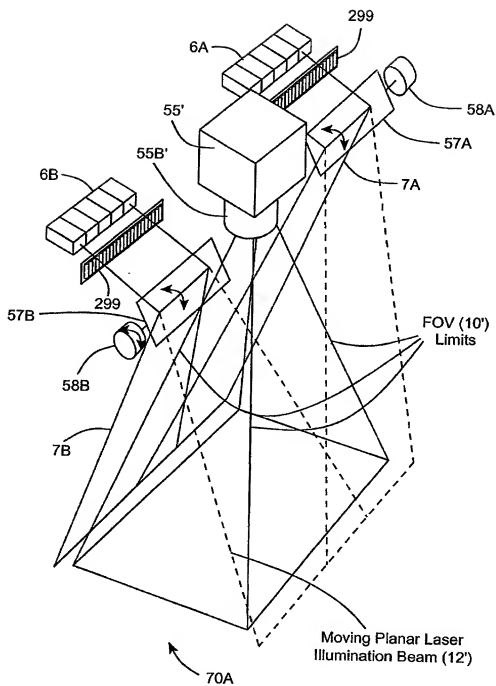


FIG. 5B1



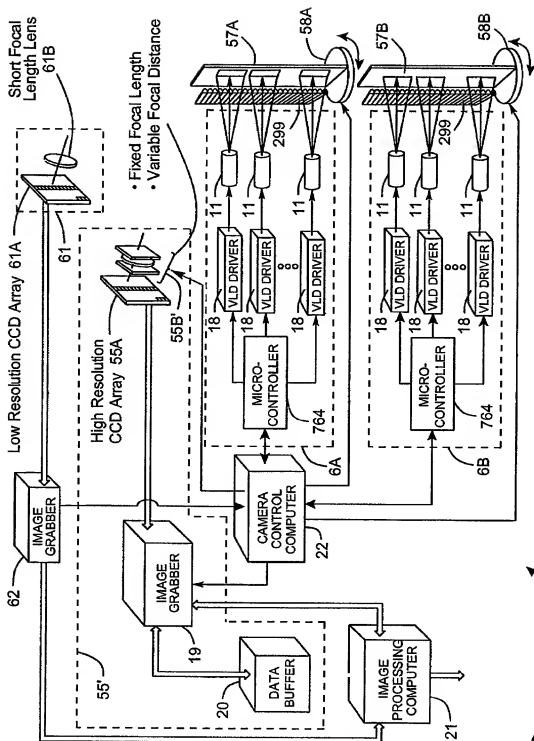


FIG. 5B3

70A



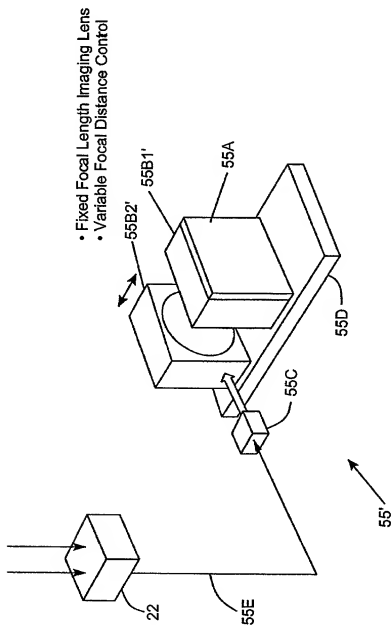


FIG. 5B4



- (1) Variable Focal Length Camera Lens
(2) Fixed Focal Distance

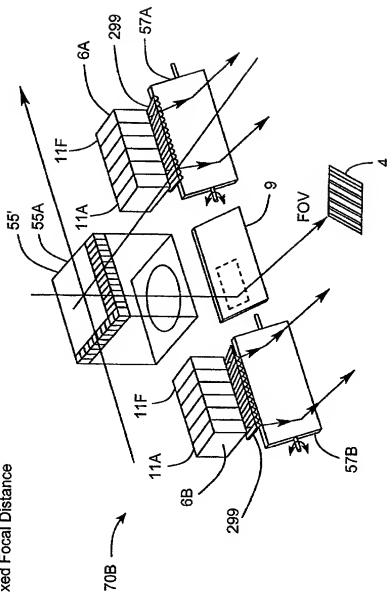


FIG. 5C2



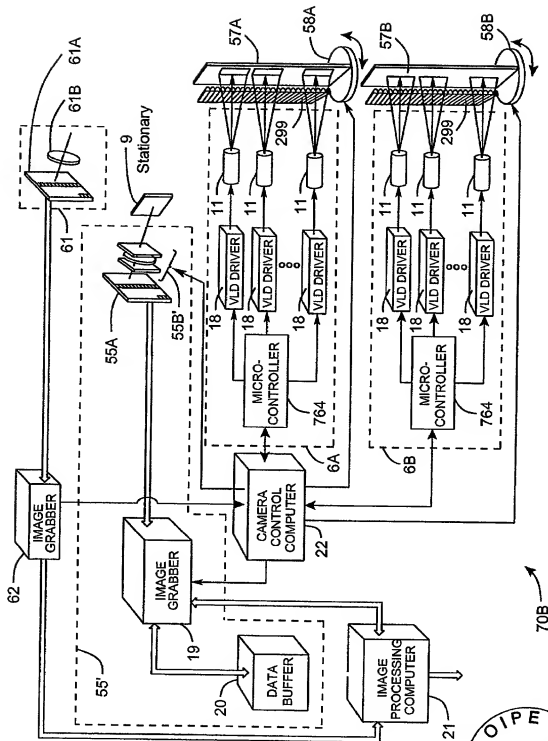


FIG. 5C3



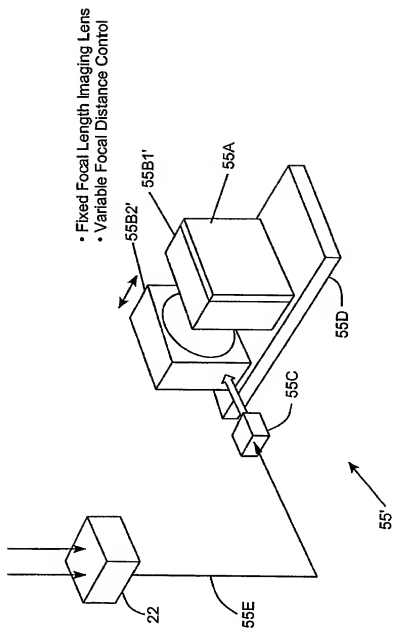


FIG. 5C4



202180-01/2001

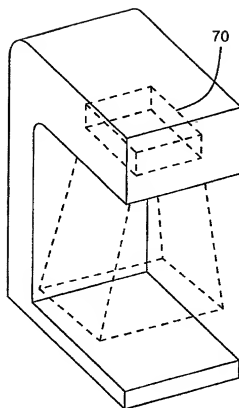


FIG. 5D



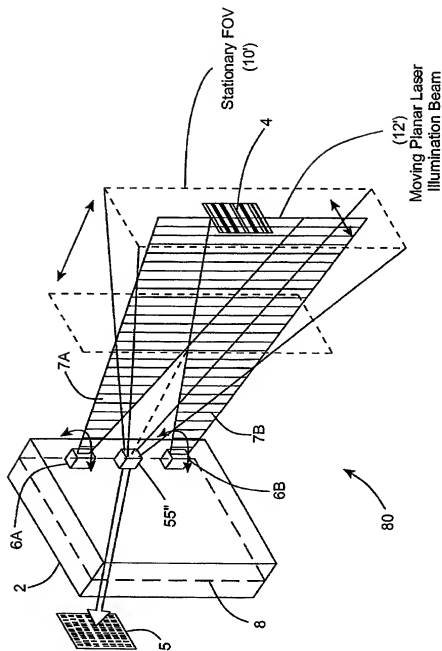


FIG. 6A



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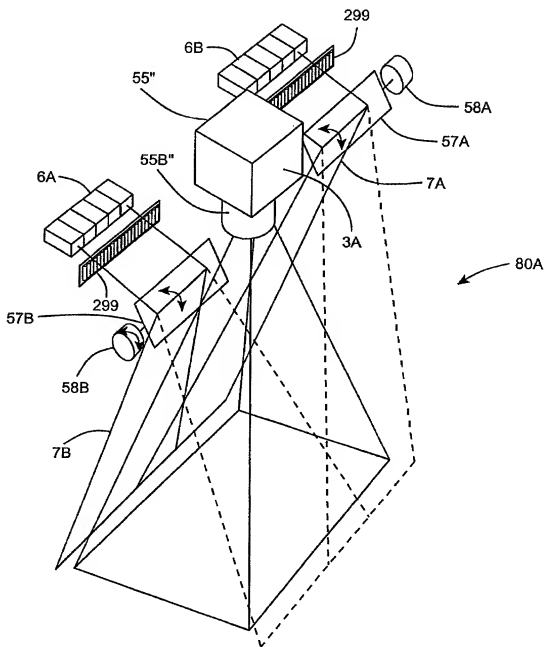


FIG. 6B1



- (1) Variable Focal Length Camera Lens
- (2) Variable Focal Distance

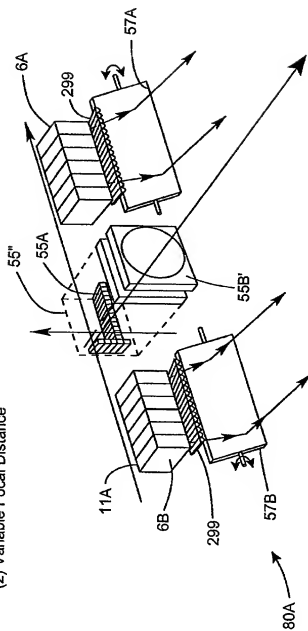


FIG. 6B2



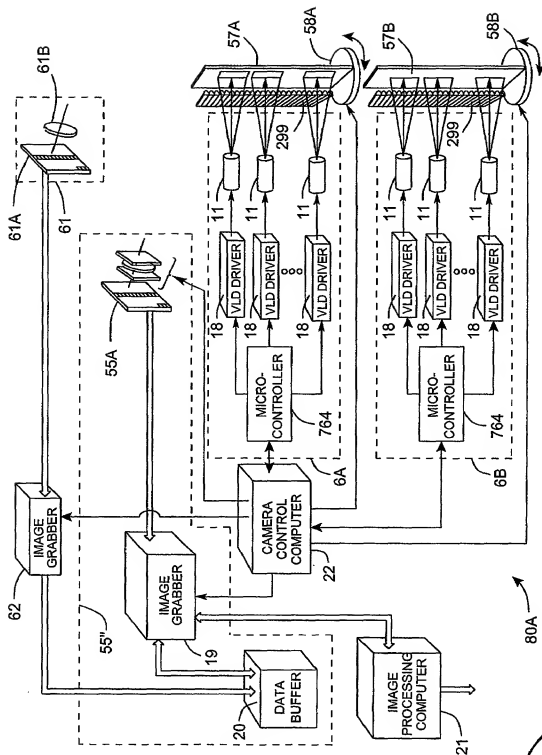


FIG. 6B3



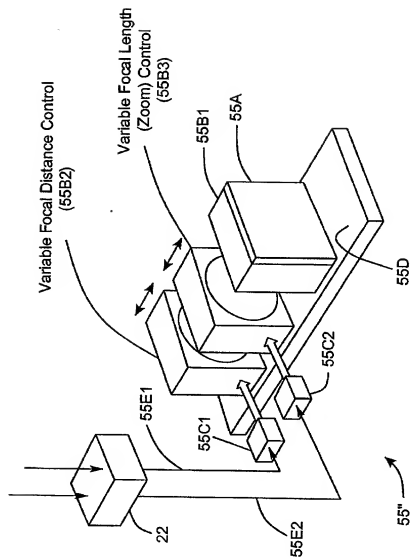


FIG. 6B4



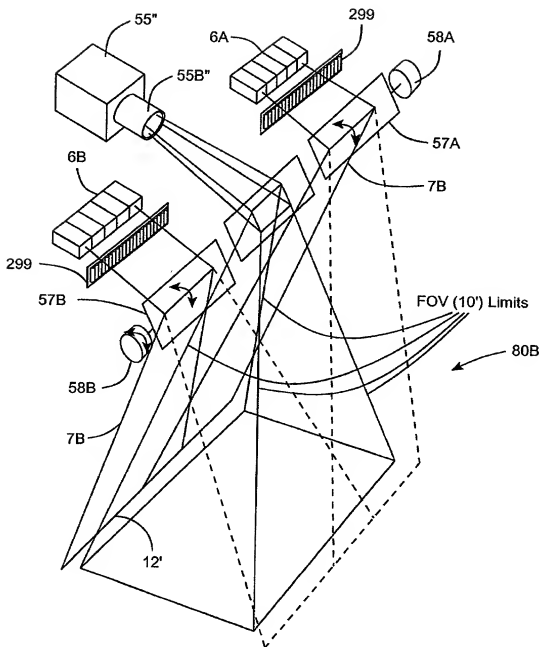


FIG. 6C1



- (1) Variable Focal Length Camera Lens
 (2) Variable Focal Distance

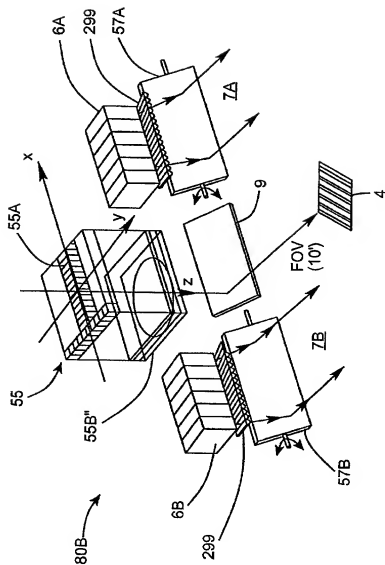


FIG. 6C2



10067140-081202

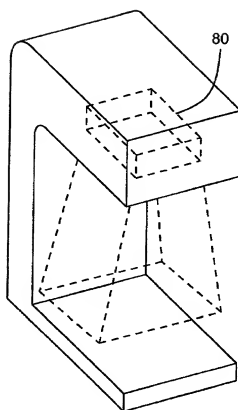


FIG. 6C5



202180 01125001

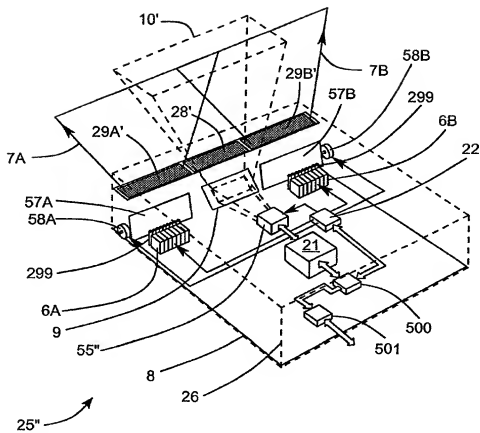


FIG. 6D1



202180-0120001

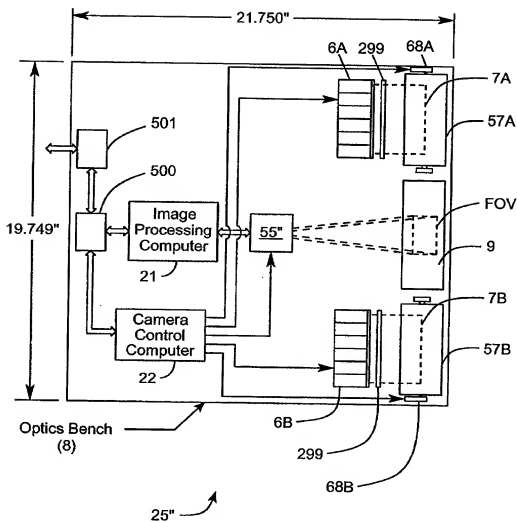


FIG. 6D2



202180-0112004

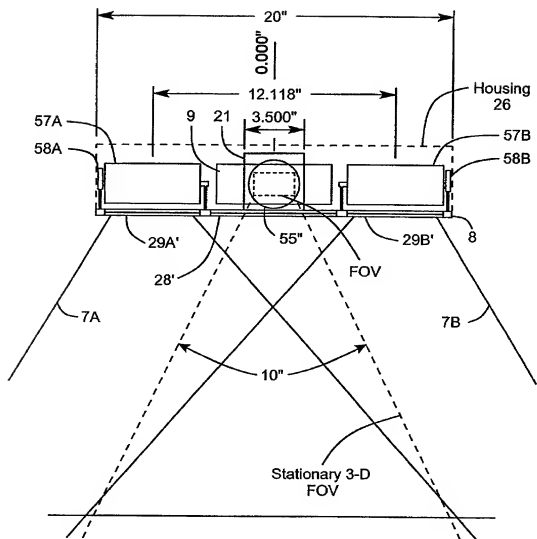


FIG. 6D3



10057440-001202

* Variable FOV

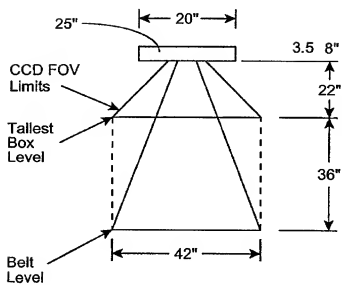


FIG. 6D5



202180-440-081202

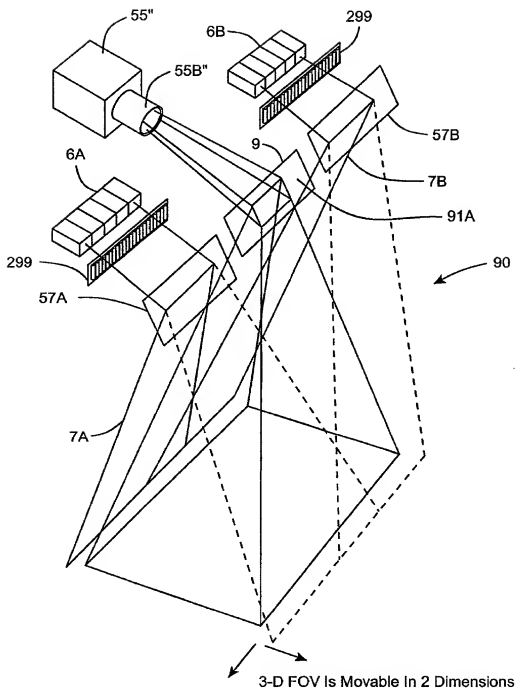


FIG. 6E1



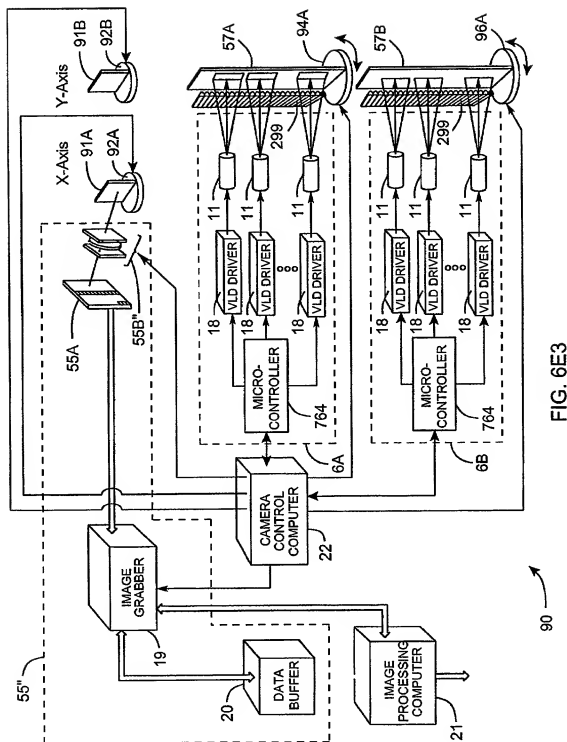


FIG. 6E3



10057140-081202

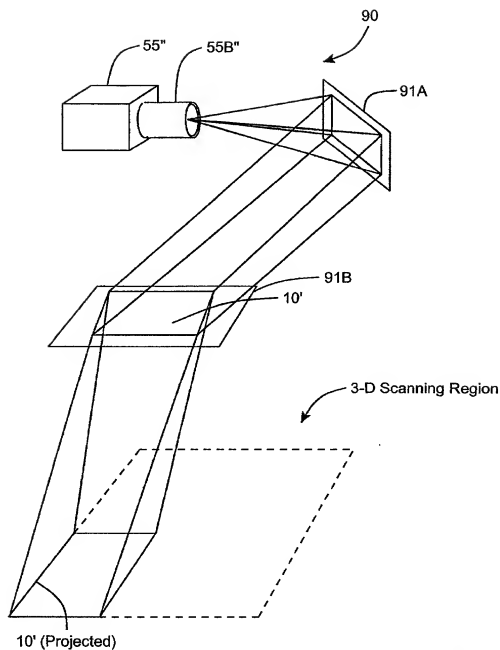


FIG. 6E4



10067140 004202
2002180 0012001

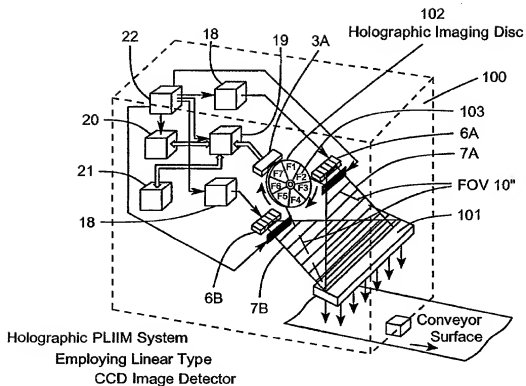


FIG. 7A

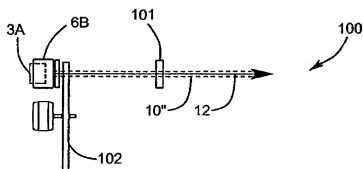


FIG. 7B



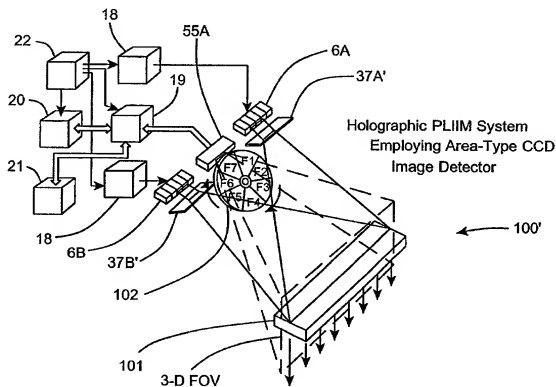


FIG. 8A

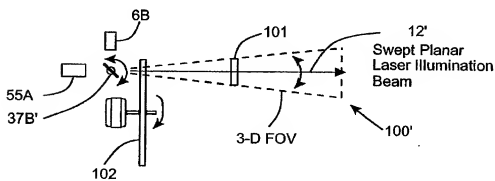


FIG. 8B



1-D Scanner Embodiment

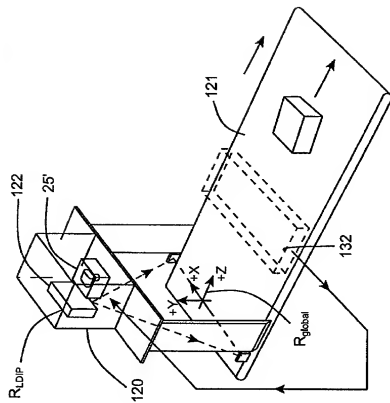
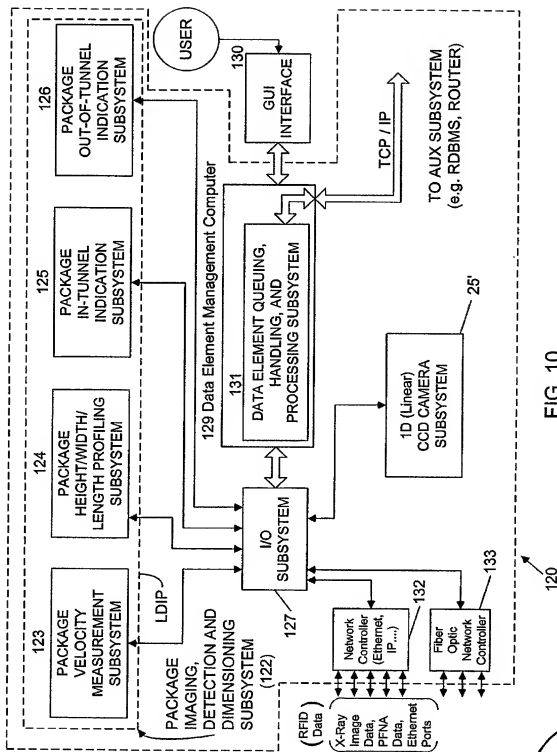


FIG. 9





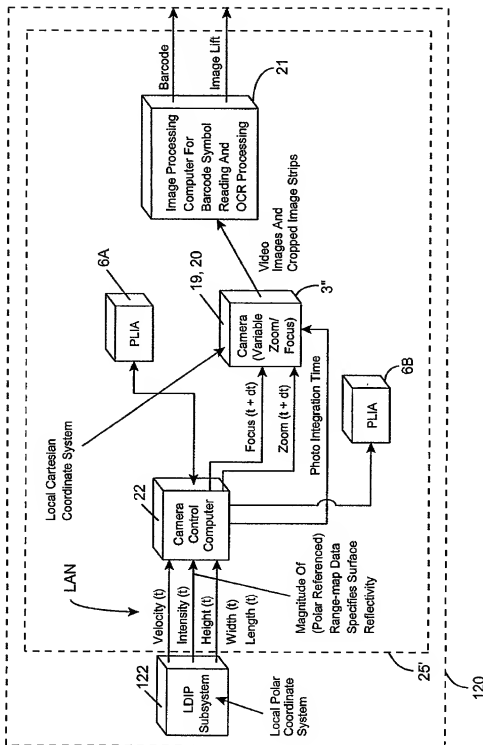


FIG. 11



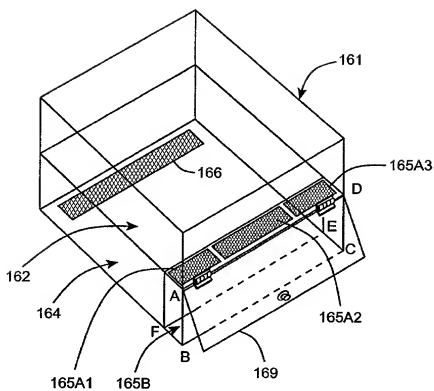


FIG. 12A



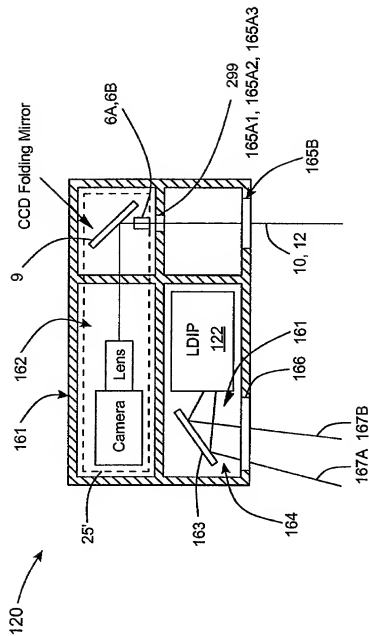


FIG. 12B



1006740-081202

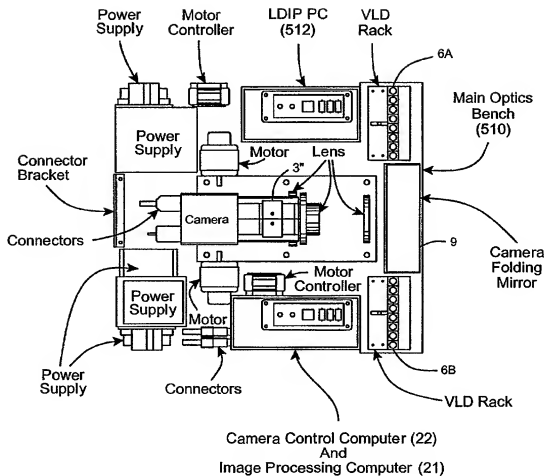


FIG. 12C



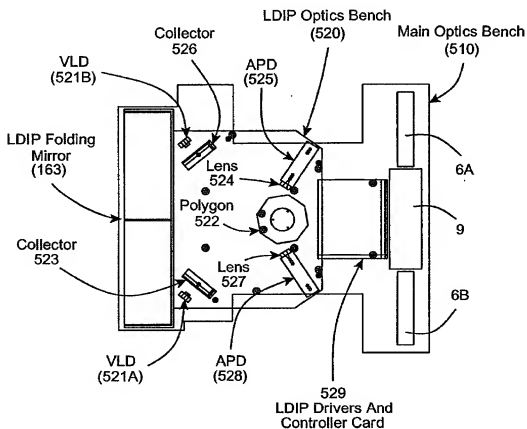
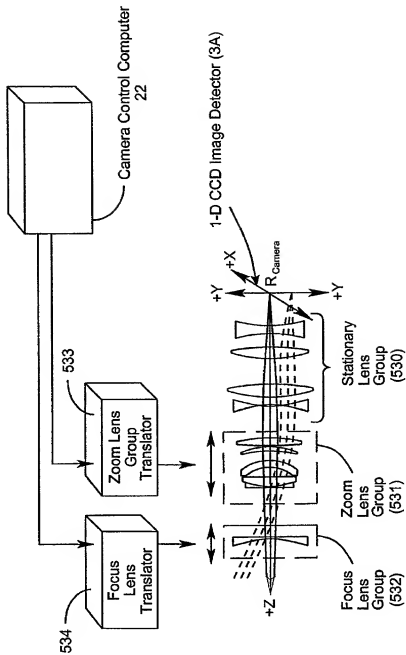


FIG. 12D





Main Optics Lens Groups

FIG. 12E



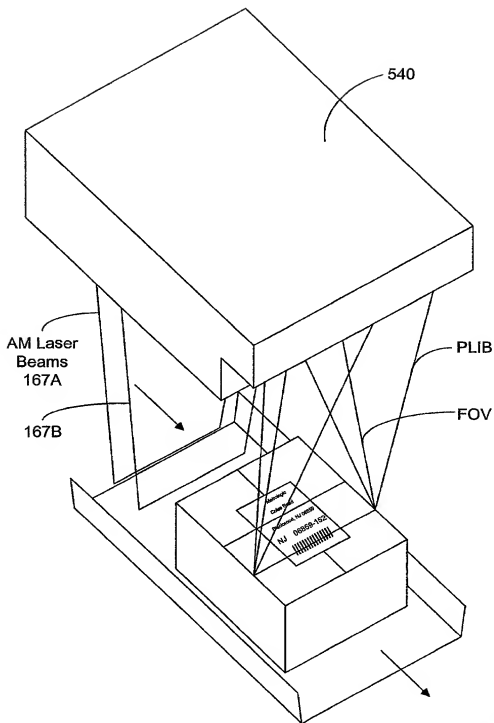


FIG. 13A



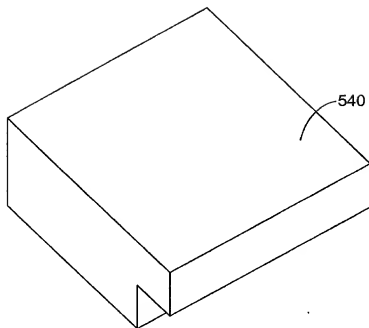


FIG. 13B

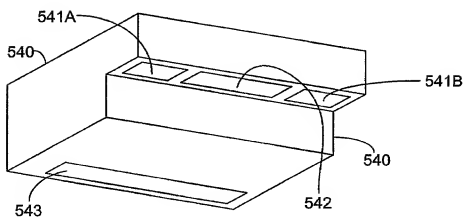


FIG. 13C



PLIIM-BASED PACKAGE IDENTIFICATION AND DIMENSIONING (PID) SYSTEM

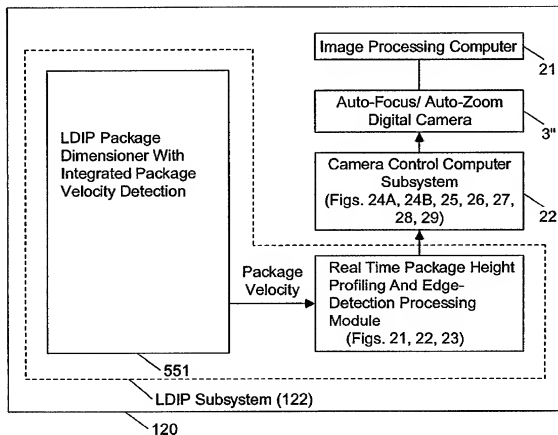


FIG. 14



LDIP REAL-TIME PACKAGE HEIGHT PROFILE AND EDGE DETECTION METHOD

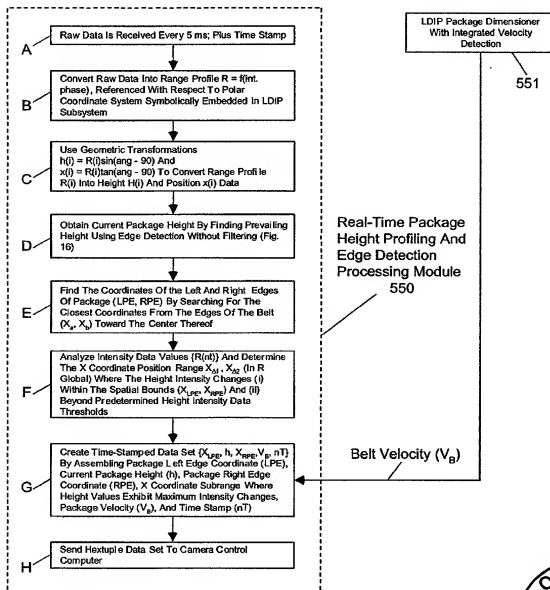


FIG. 15



LDIP REAL-TIME PACKAGE EDGE DETECTION

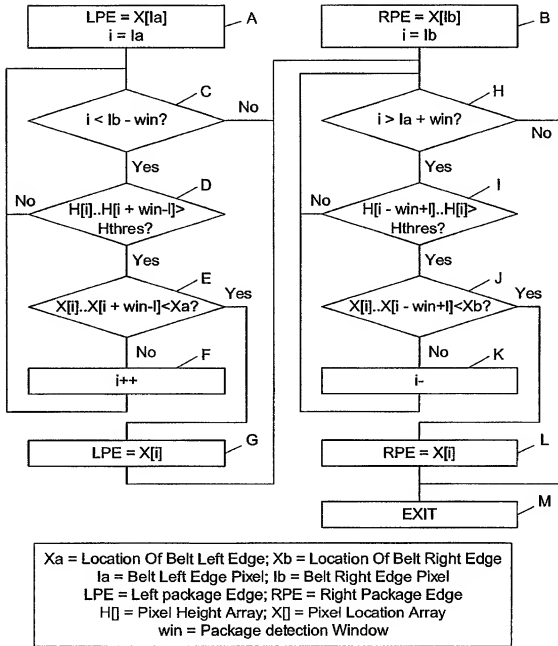


FIG. 16



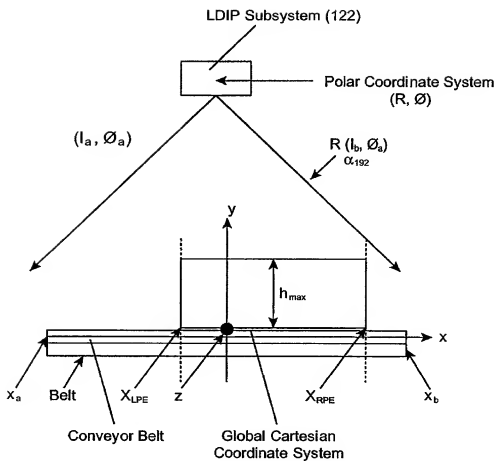


FIG. 17



Information Measured At Scan Angles Before Coordinate Transformations

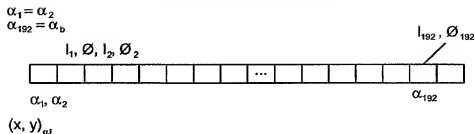


FIG. 17A

Range And Polar Angle Measures Taken At Scan Angle α Before Coordinate Transformations

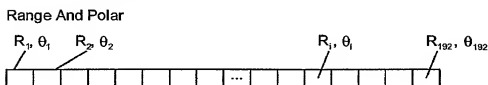


FIG. 17B

Measured Package Height And Position Values After Coordinate Transformations

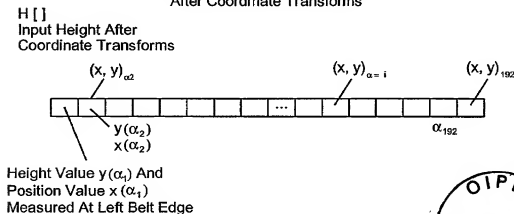


FIG. 17C



CAMERA CONTROL PROCESS CARRIED OUT WITHIN THE CAMERA
CONTROL SUBSYSTEM OF EACH OBJECT IDENTIFICATION AND
ATTRIBUTE ACQUISITION SYSTEM OF PRESENT INVENTION

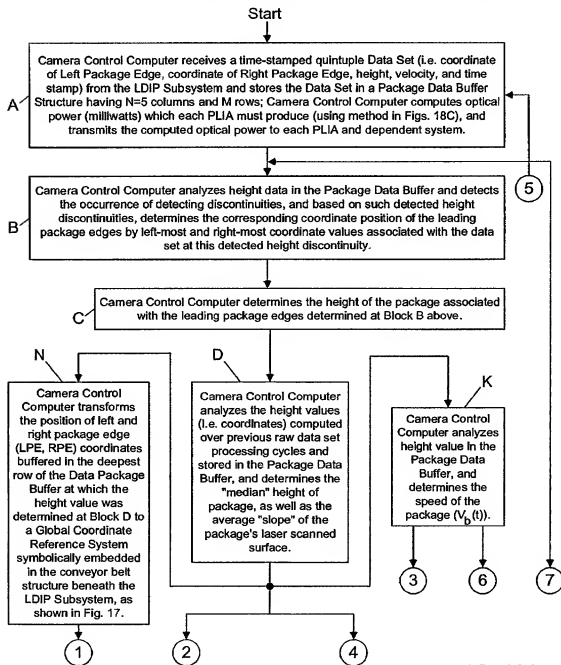


FIG. 18A



20250704170001

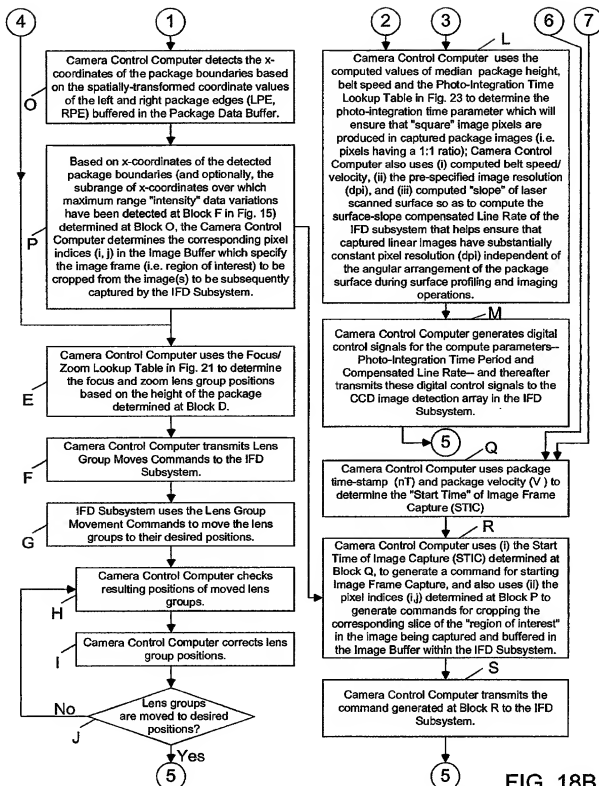


FIG. 18B



METHOD OF COMPUTING OPTICAL OUTPUT POWER FROM LASER
DIODES IN A PLANAR LASER ILLUMINATION ARRAY (PLIA) FOR
CONTROLLING THE CONSTANT WHITE-LEVEL IN IMAGE PIXELS
CAPTURED BY A PLIIM-BASED LINEAR IMAGER

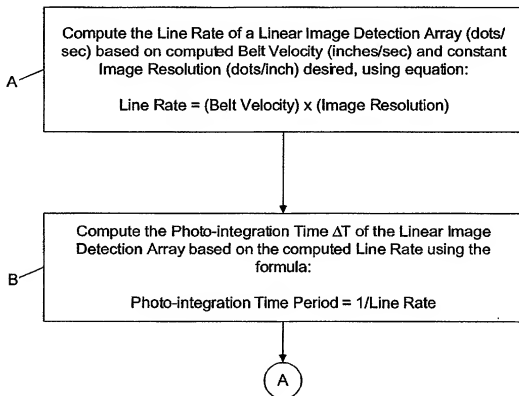


FIG. 18C1



A



Compute the Optical Power (milliwatts) of each PLIA based on the computed Photo-integration Time Period (ΔT) using the following formula:

$$\text{Optical Power of VLD (milliwatts)} = \frac{\text{constant}}{\text{Photo-integration Time Period } \Delta T}$$

FIG. 18C2



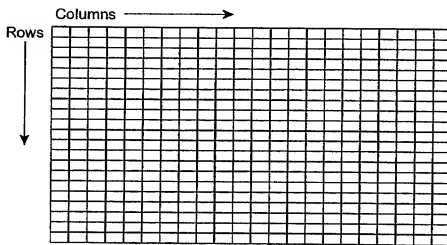
10067140-081202

X Coordinate Subrange Where
Maximum Range "Intensity"
Variations Have Been Detected

Left Package Edge (LPE)	Package Height (h)	Right Package Edge (RPE)	Package Velocity	Time-Stamp (nT)	
					Row 1
					Row 2
					Row 3
					Row 4
					Row 5
					Row M

Package Data Buffer (FIFO)

FIG. 19



Camera Pixel Data Buffer
Pixel Indices (i, j)

FIG. 20



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202780-04T25001

Zoom And Focus Lens Group Position
Look-Up Table

Distance From Camera H (mm)	Zoom Group Distance (mm) Y (Zoom)	Focus Group Distance (mm) Y (Focus)
1000	21.57485228	2.47E-05
1100	19.38086986	10.96008783
1200	17.10573434	20.35018377
1300	14.75787646	29.67812002
1400	12.39150585	38.87812595
1500	9.97914359	42.87845436
1600	7.540935114	46.44003358
1700	5.076794775	53.25495831
1800	2.585965096	57.40634303
1900	0.098972739	60.96980815

(Use Interpolation
Techniques For
Working Distances
Between Listed
Points In Table)



FIG. 21

* Note: The focal distance and zoom (eff. focal length) of camera lens are coupled (inter-dependent) in this commercial embodiment.

Camera Has A Fixed Aperture F56

Focus And Zoom Lens Movement vs. Working Distances

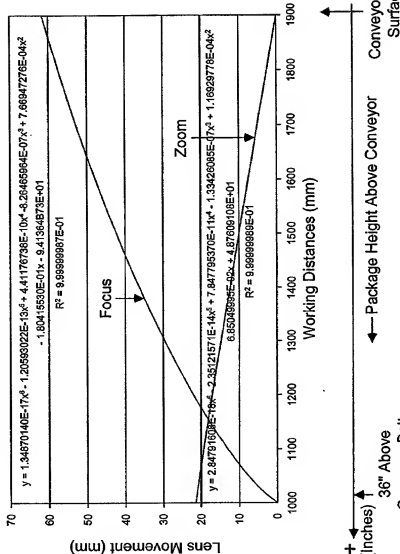


FIG. 22



Photo-Integration Time Look-Up Table

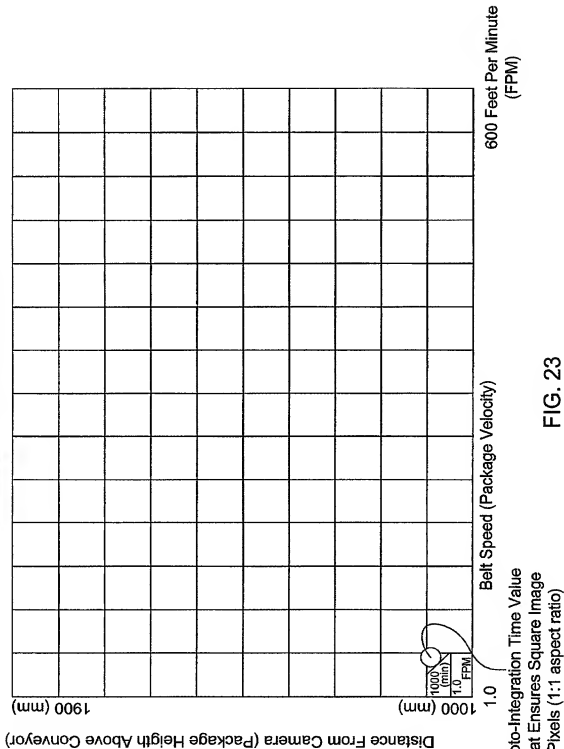


FIG. 23

Photo-Integration Time Value
That Ensures Square Image
Pixels (1:1 aspect ratio)



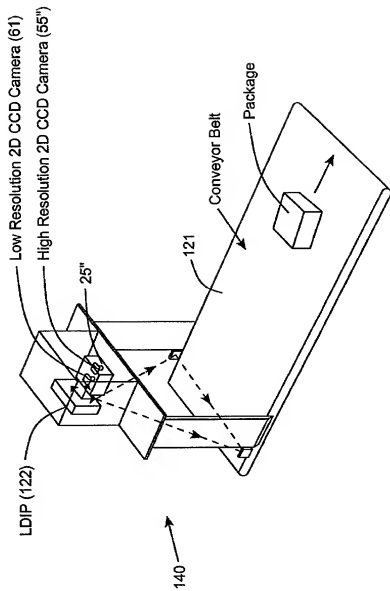


FIG. 24



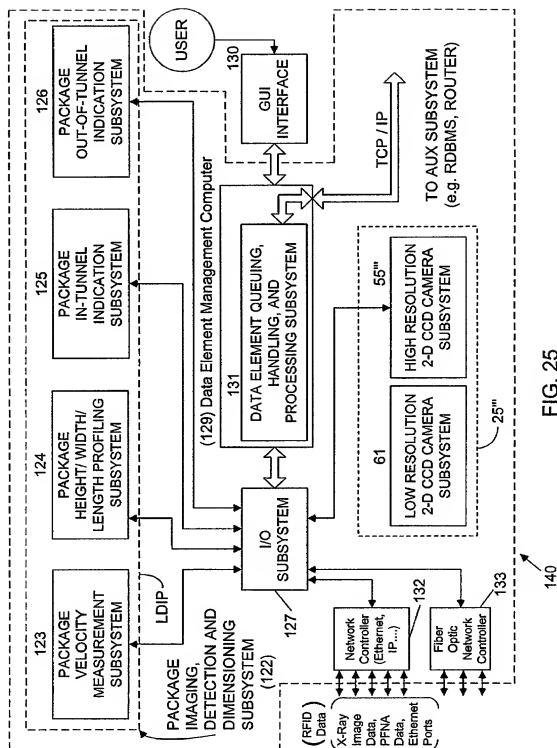


FIG. 25



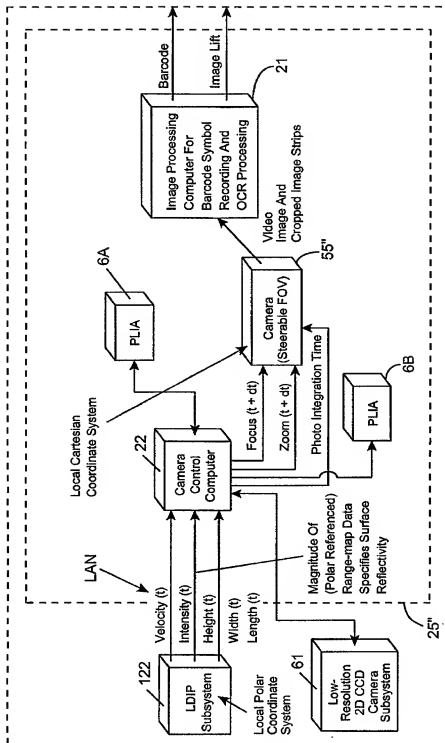


FIG. 26



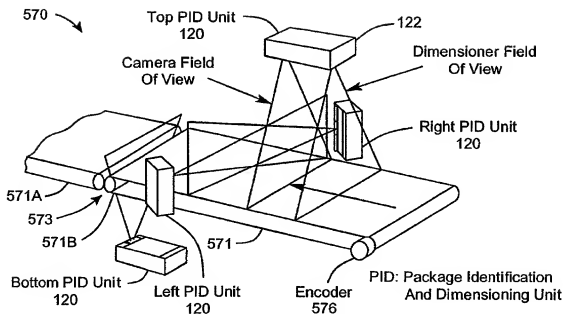


FIG. 27

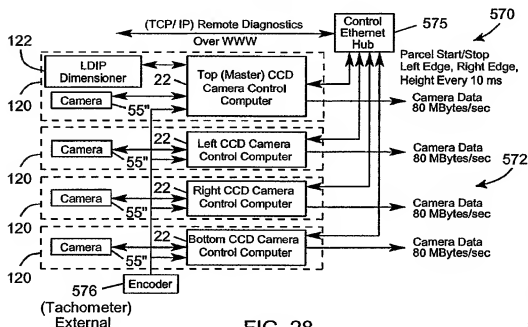


FIG. 28



20250714 08:29:01

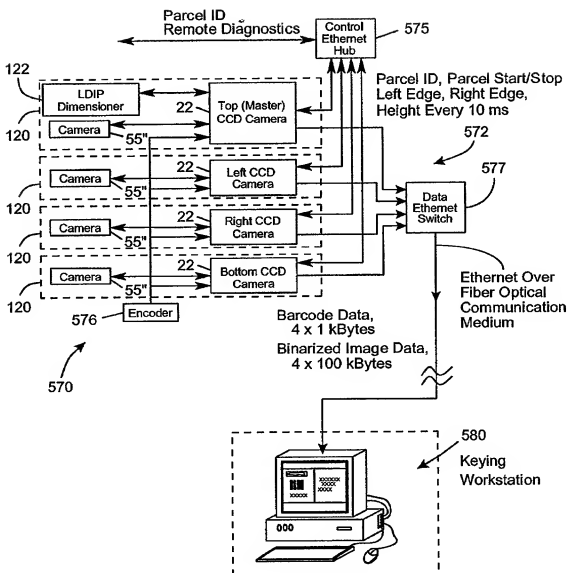


FIG. 29



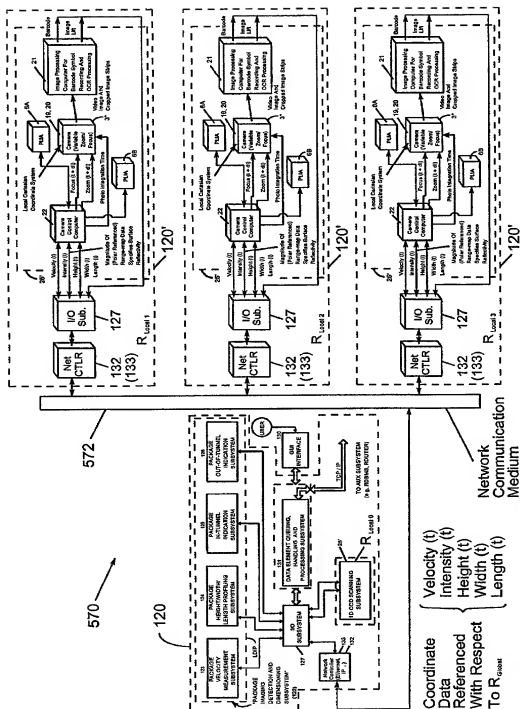


FIG. 30



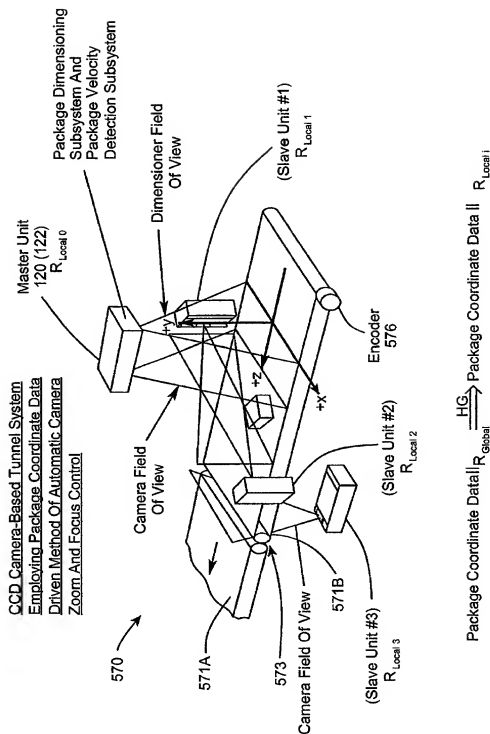


FIG. 31



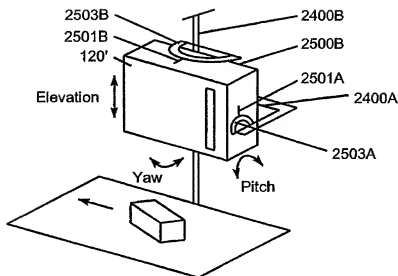


FIG. 31A

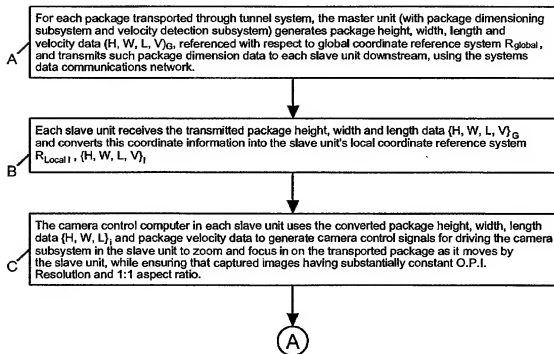


FIG. 32A



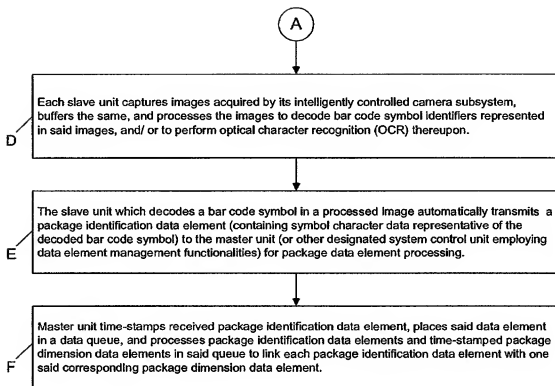
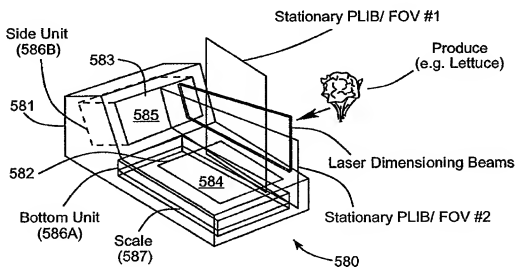
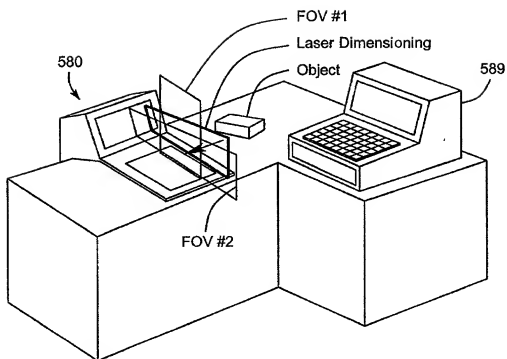
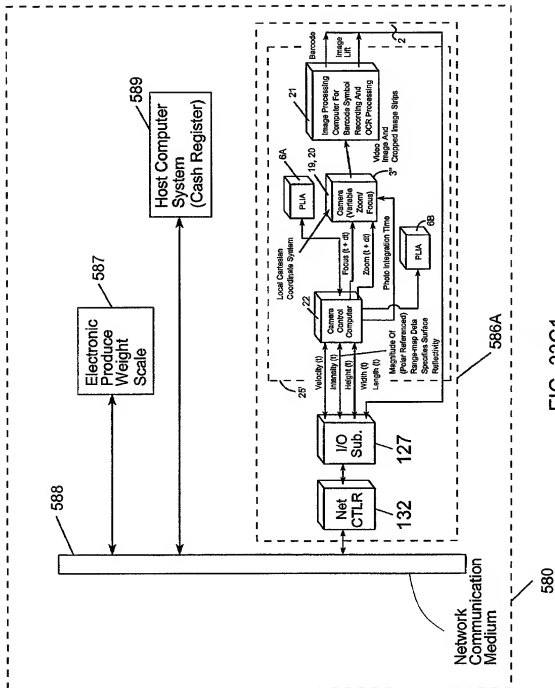


FIG. 32B



1067140-081202





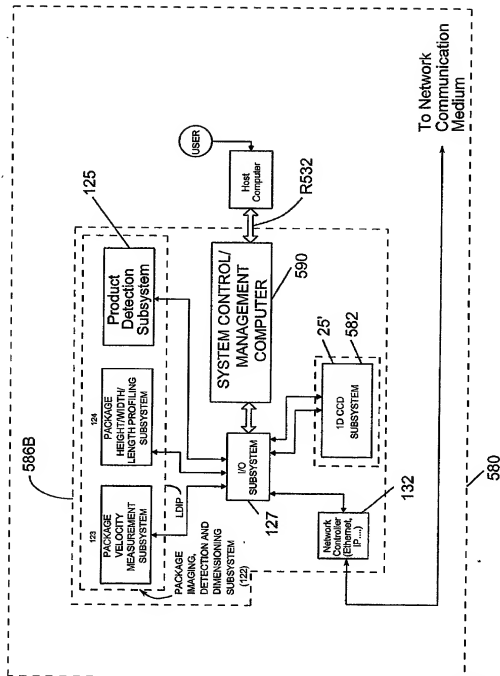


FIG. 33C2



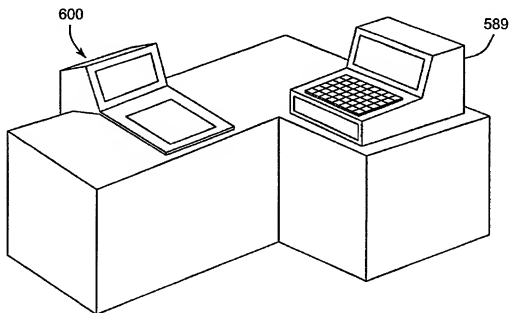


FIG. 34A

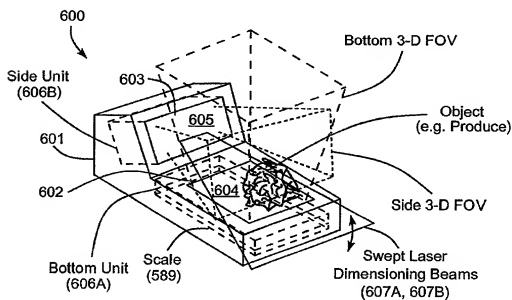
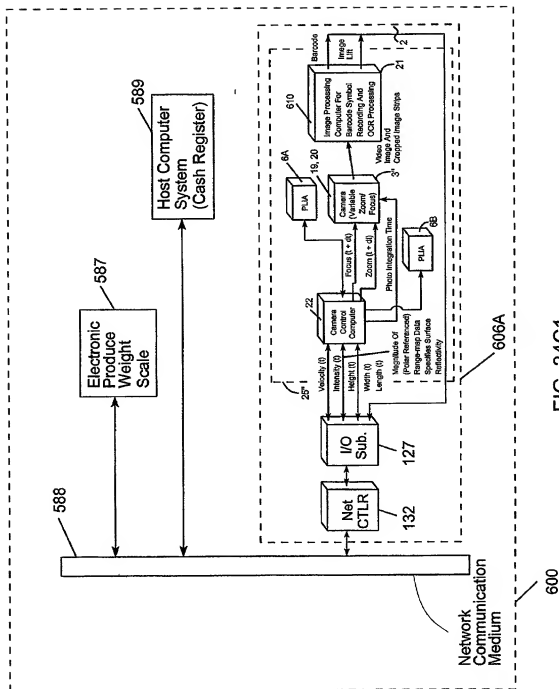


FIG. 34B





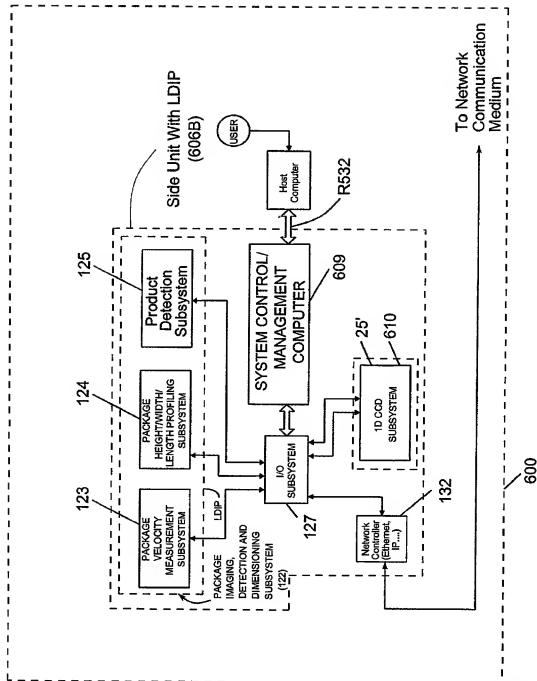


FIG. 34C2



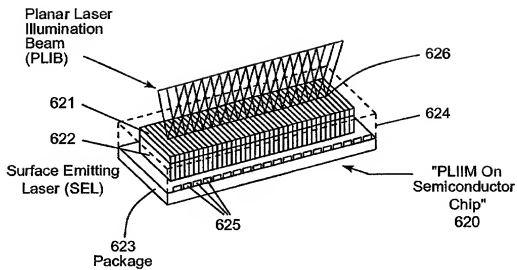


FIG. 35A

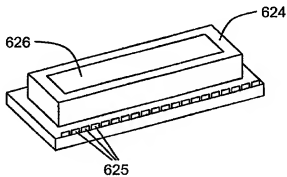


FIG. 35B



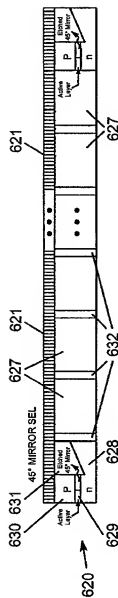


FIG. 36A

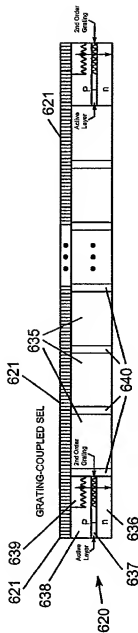


FIG. 36B

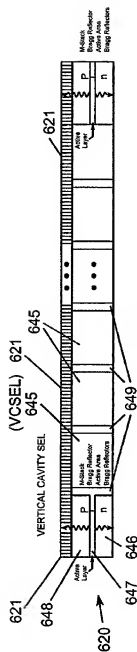


FIG. 36C



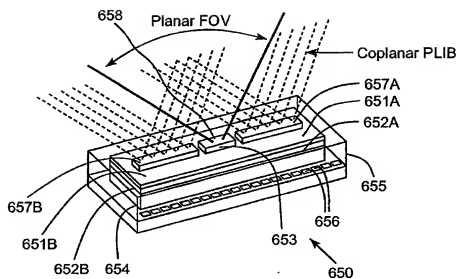


FIG. 37



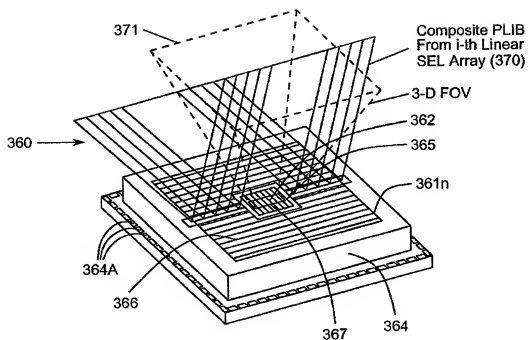


FIG. 38A

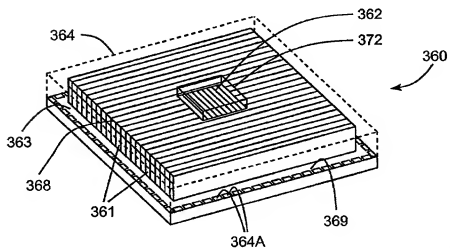


FIG. 38B



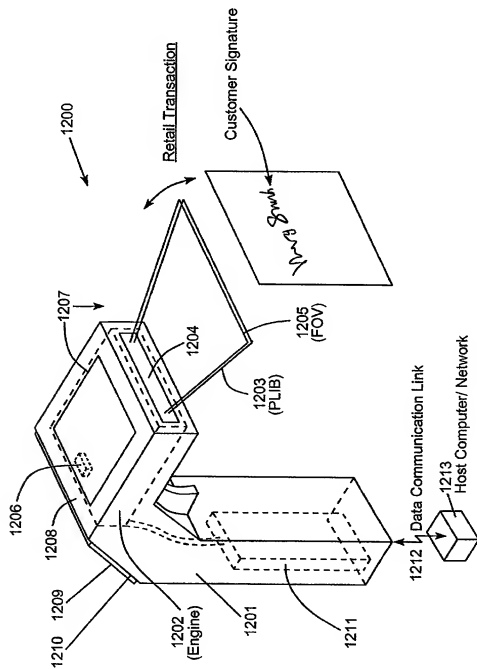


FIG. 39A



202180-0472907

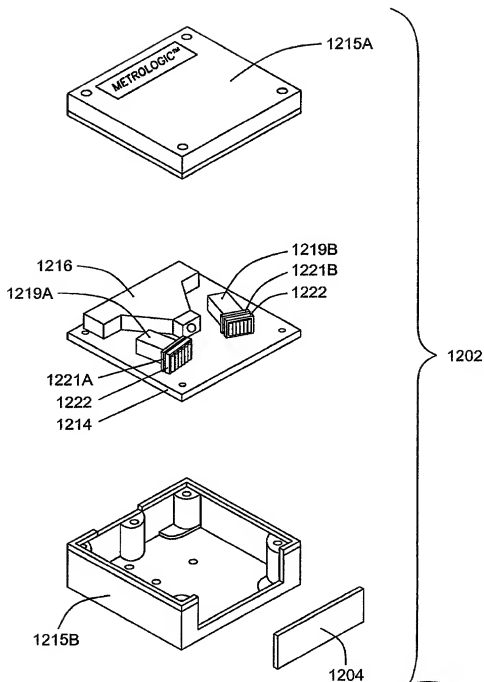


FIG. 39B



202180-01729007

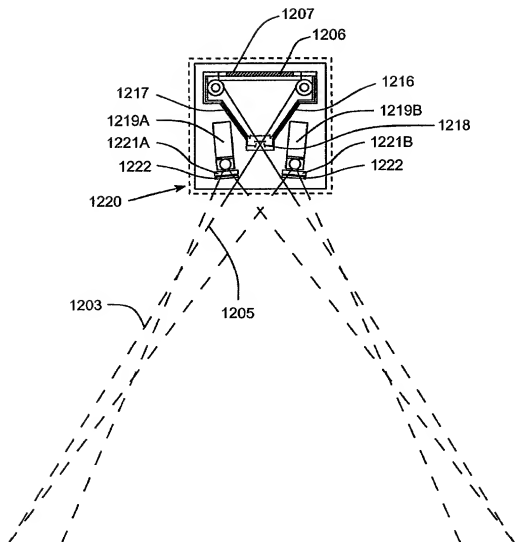


FIG. 39C



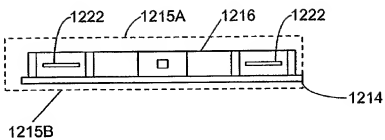


FIG. 39D

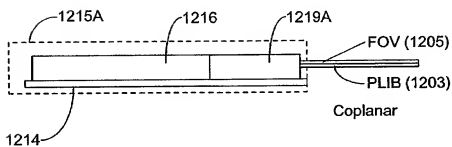


FIG. 39E



202180-04129001

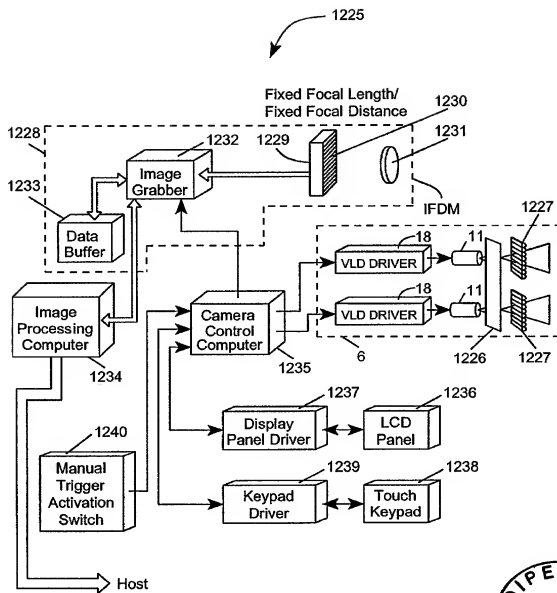
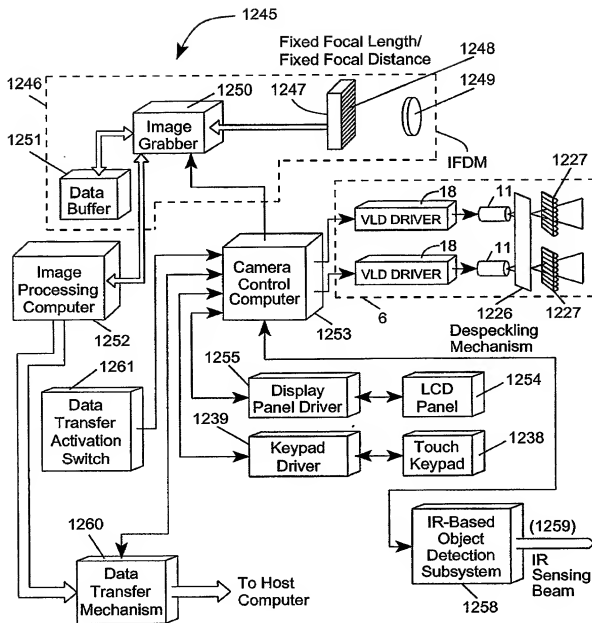


FIG. 40A1



202107-04125001

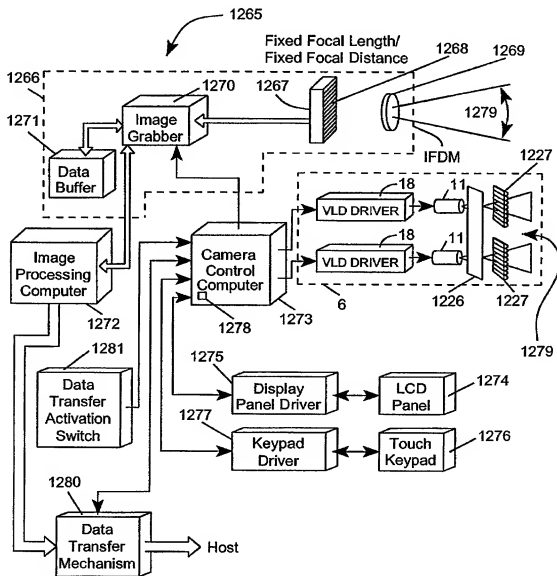


Automatic with IR Object Detection

FIG. 40A2



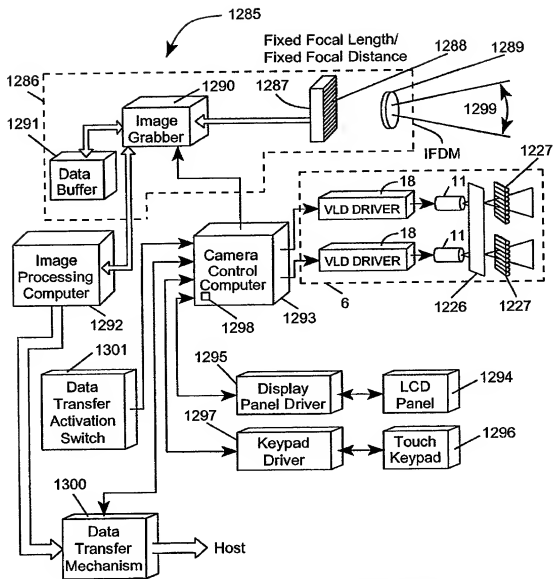
202180-01129001



Automatic with Laser Based Object Detection

FIG. 40A3





Automatic with Passive CCD
Based Object Detection

FIG. 40A4



[illegible]

Automatic With BCD Only
And No Object Detection

FIG. 40A5



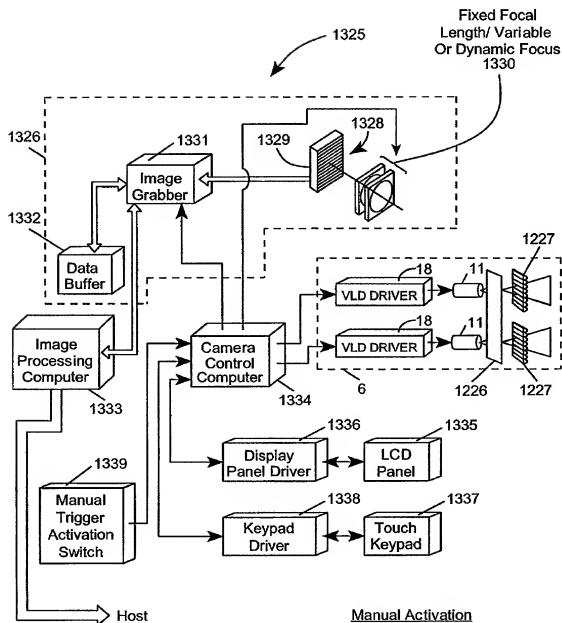
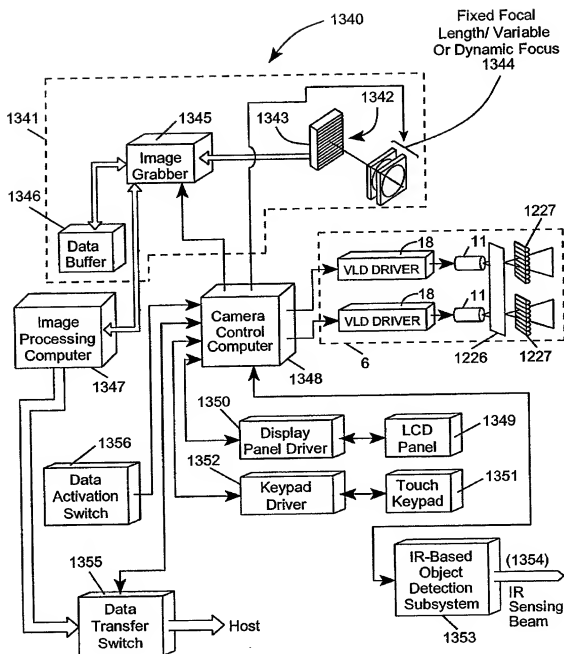


FIG. 40B1





Automatic With IR-Based
Object Detection

FIG. 40B2



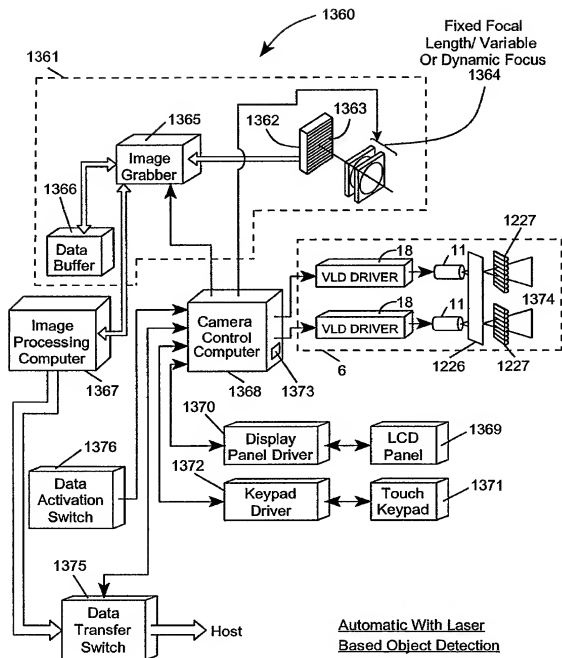
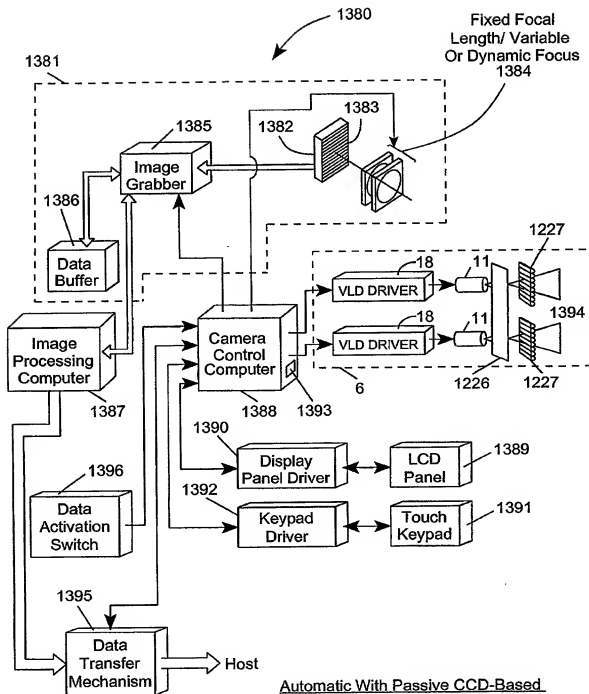


FIG. 40B3





Automatic With Passive CCD-Based
Object Detection

FIG. 40B4



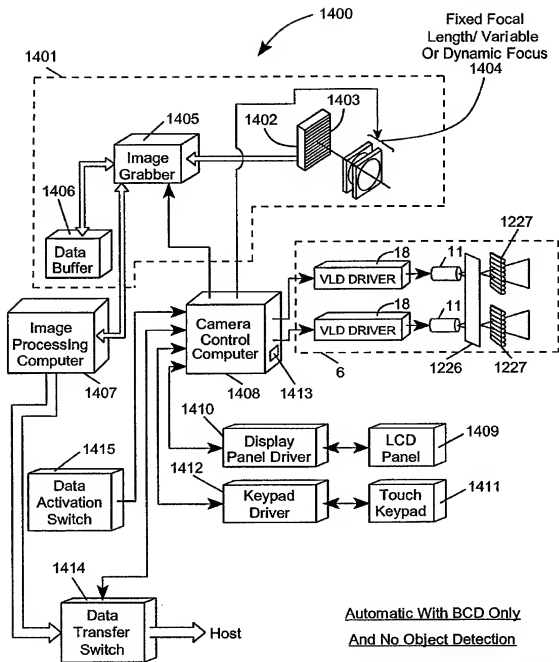


FIG. 40B5



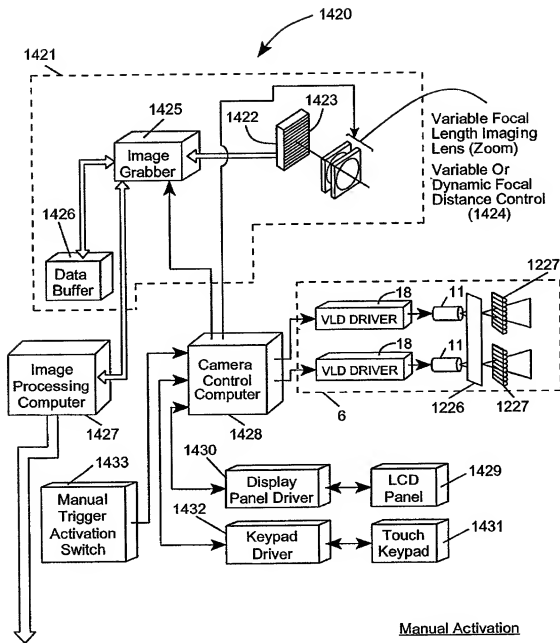
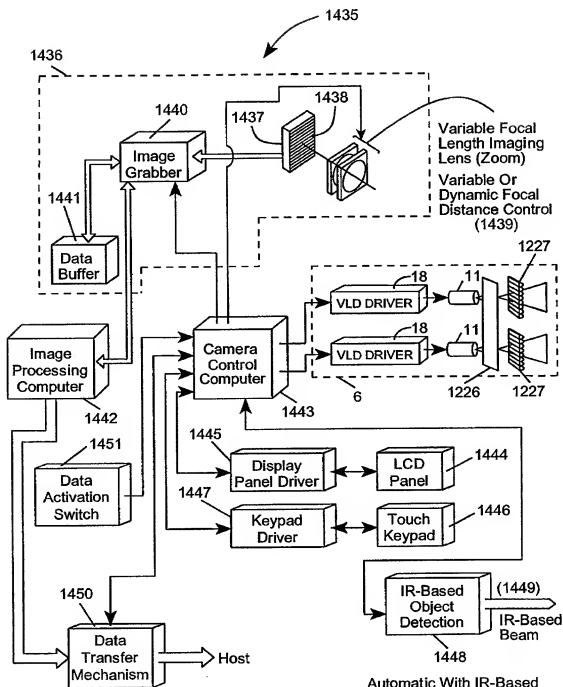


FIG. 40C1





Automatic With IR-Based
Object Detection

FIG. 40C2



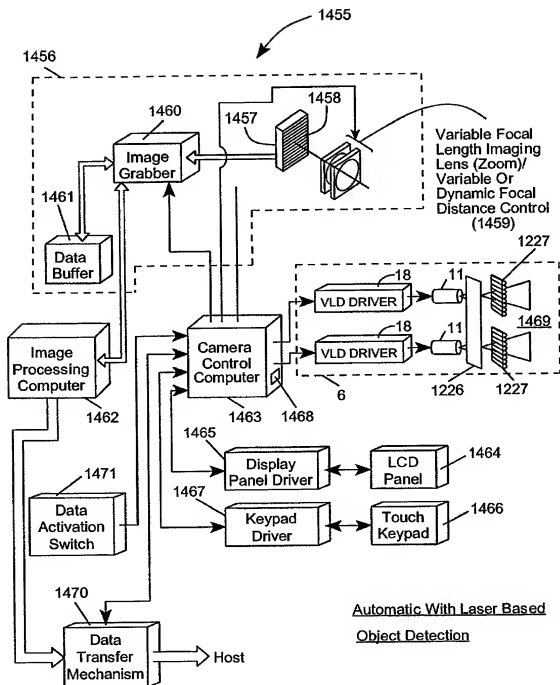


FIG. 40C3



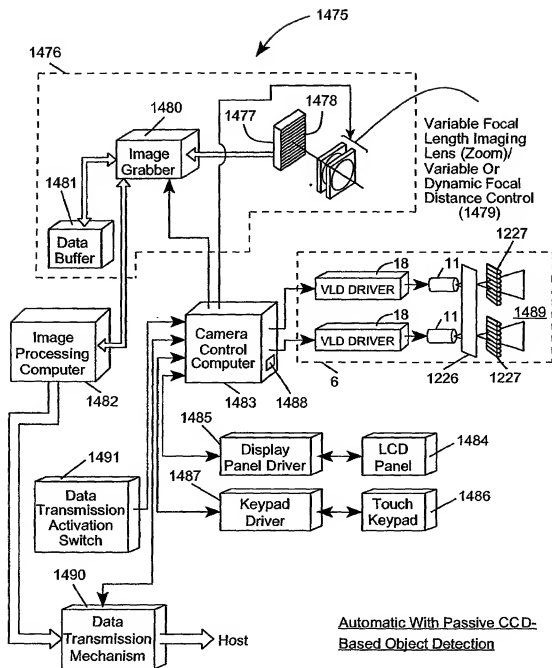


FIG. 40C4



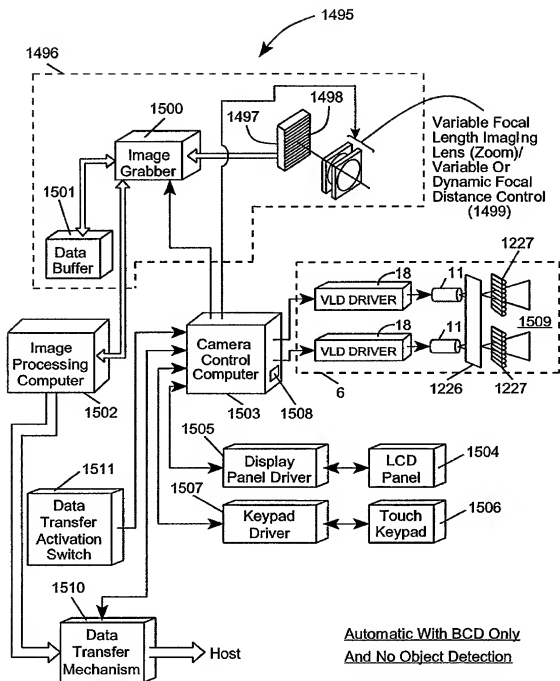
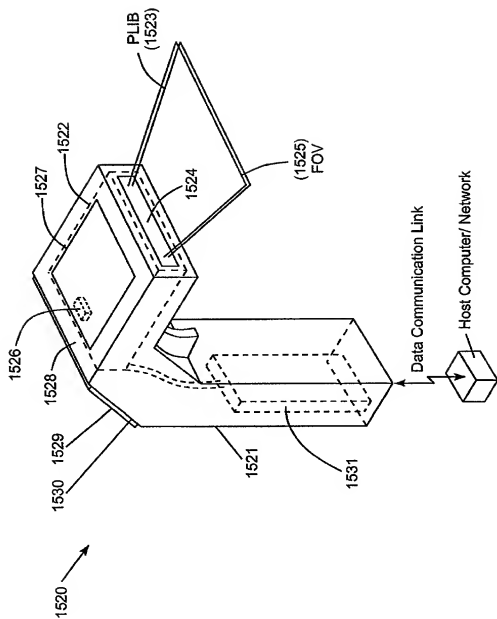


FIG. 40C5





202180-0172907

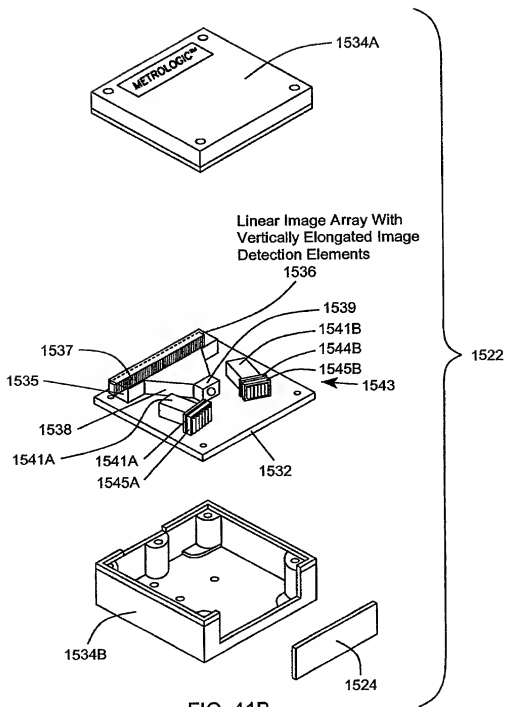


FIG. 41B



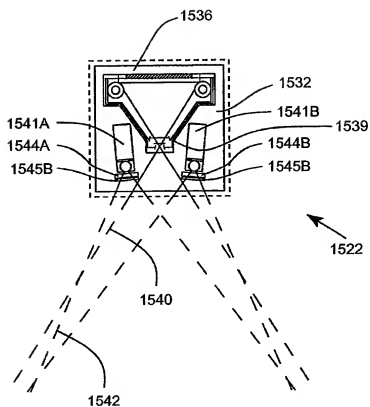


FIG. 41C

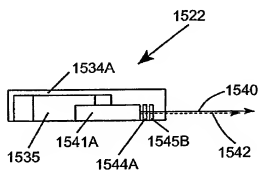


FIG. 41D



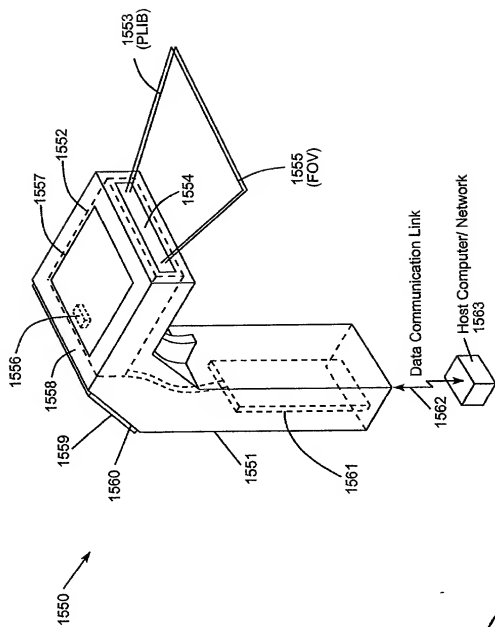


FIG. 42A



202180-01129001

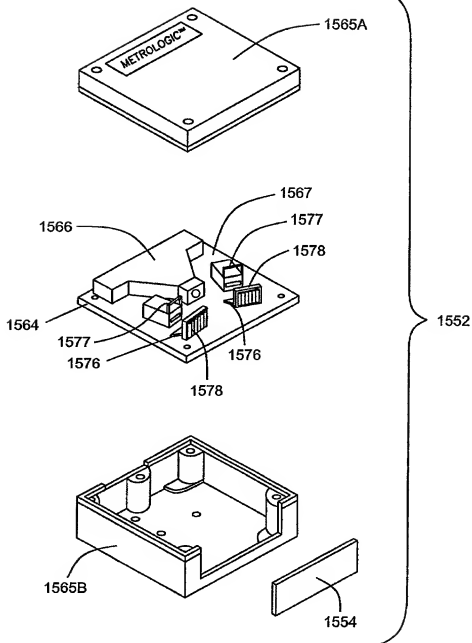


FIG. 42B



10067140-081202
2002180-0472001

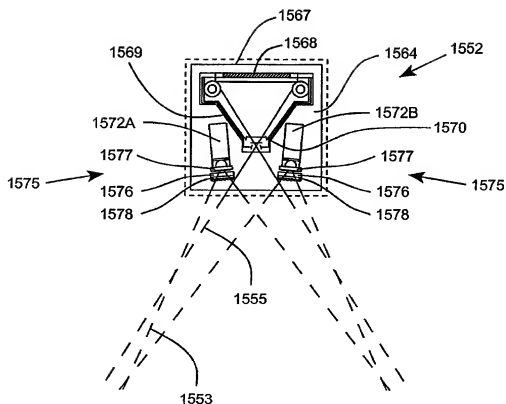


FIG. 42C

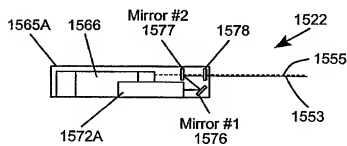


FIG. 42D



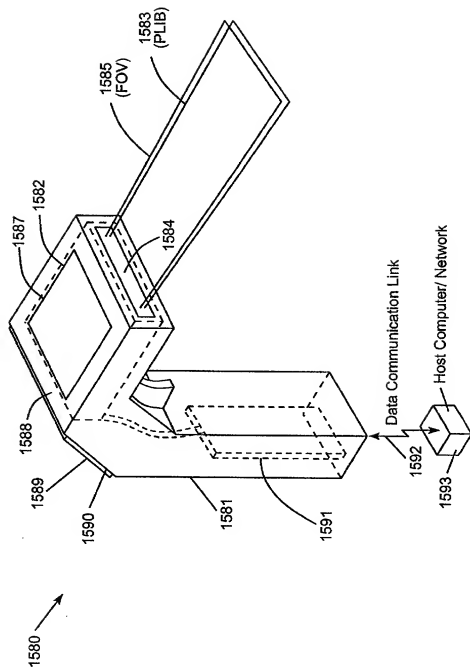


FIG. 43A



202120 04729001

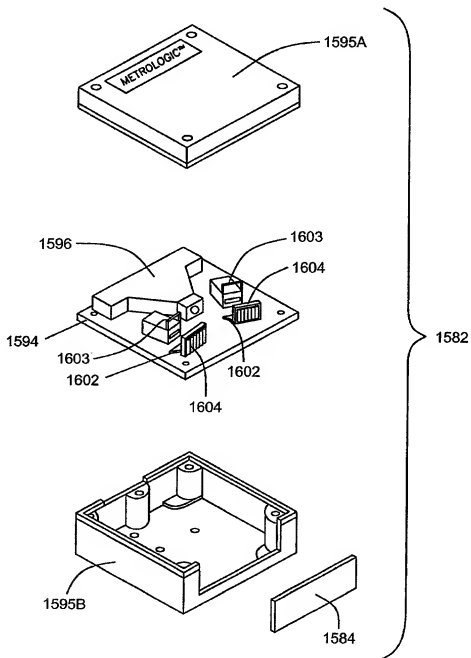


FIG. 43B



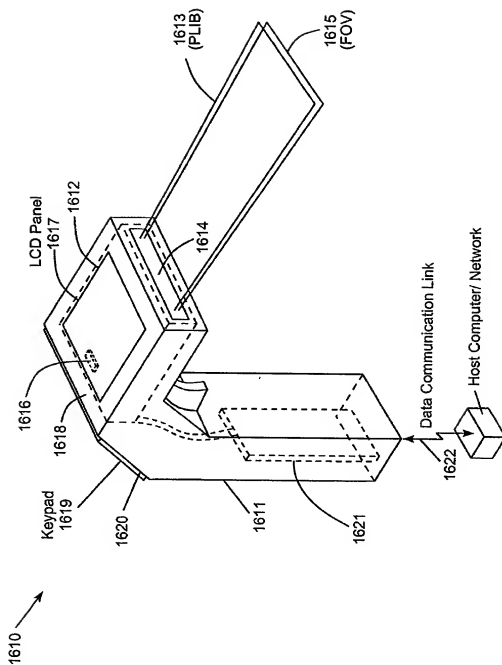


FIG. 44A



202180-01-29007

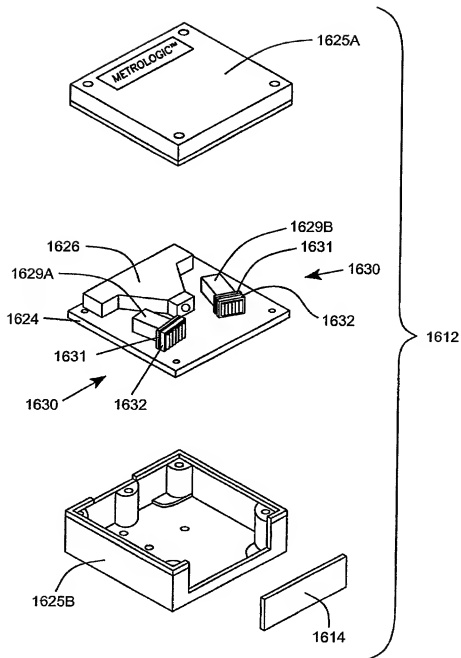


FIG. 44B



202180-0475001

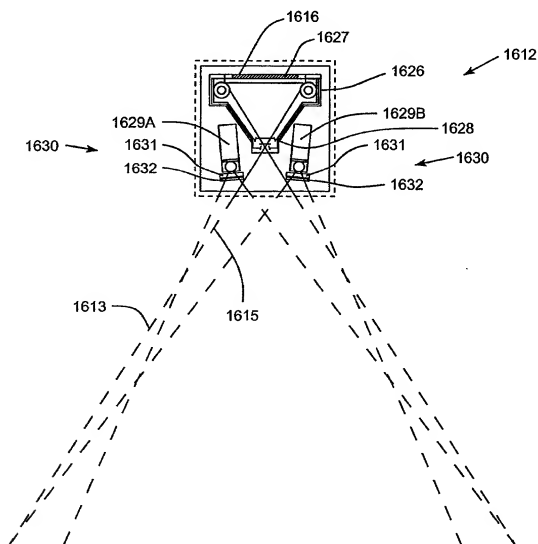


FIG. 44C



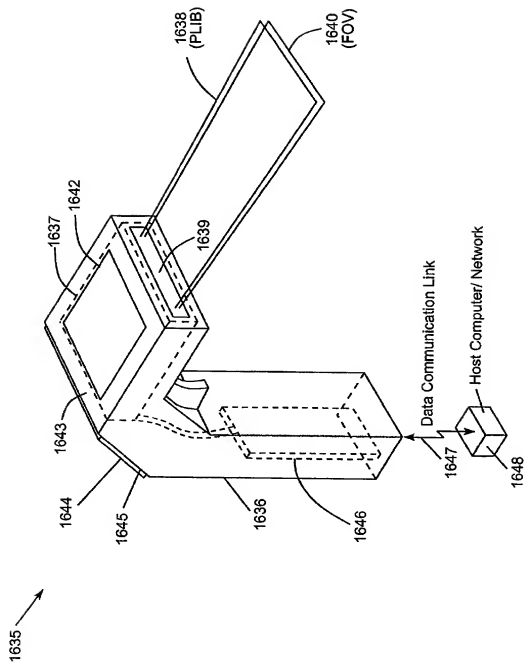


FIG. 45A



10057140-081202

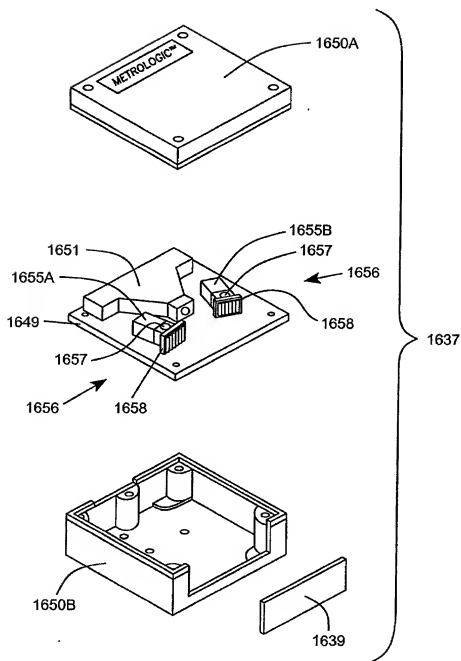


FIG. 45B



FIG. 45C



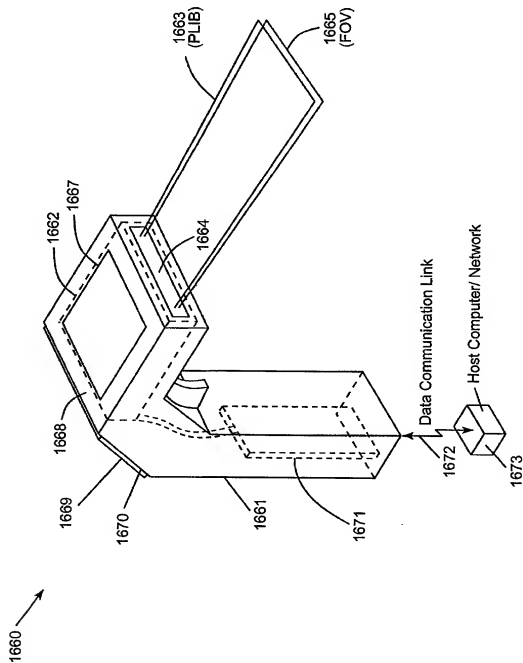


FIG. 46A



10657140-081202

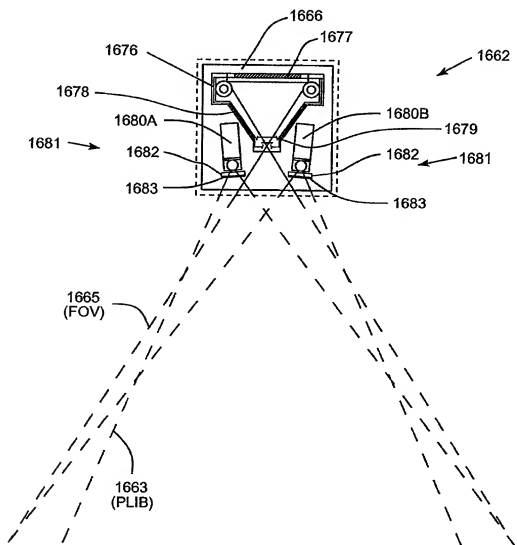


FIG. 46C



1690 →

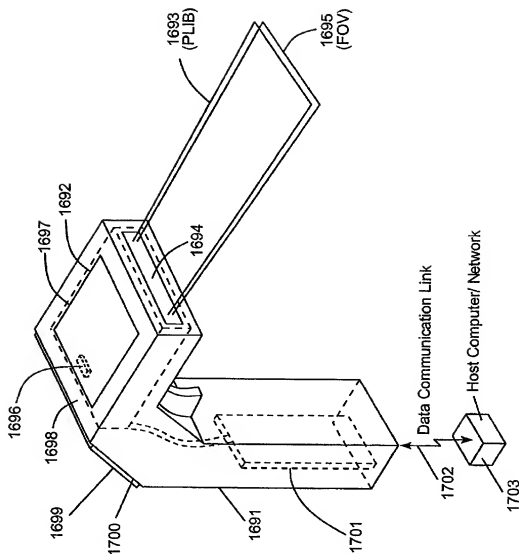


FIG. 47A



202180-0112001

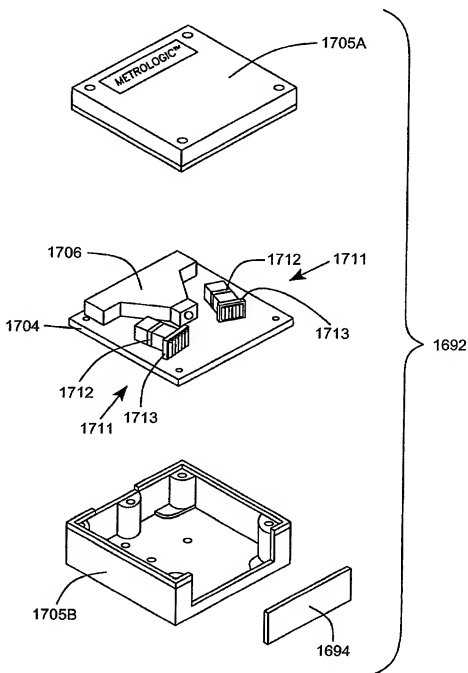


FIG. 47B



202180-04178001 10057440-084202

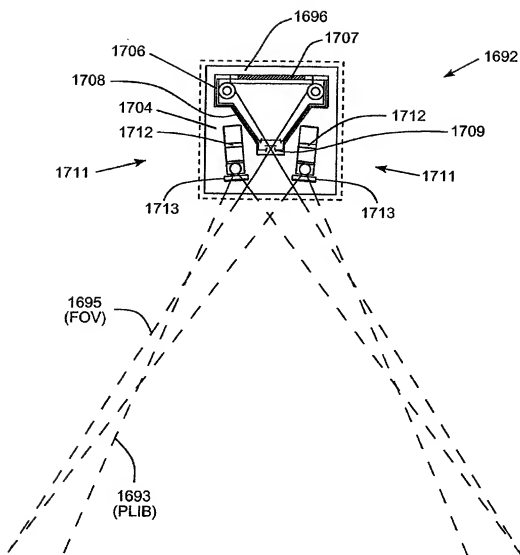


FIG. 47C



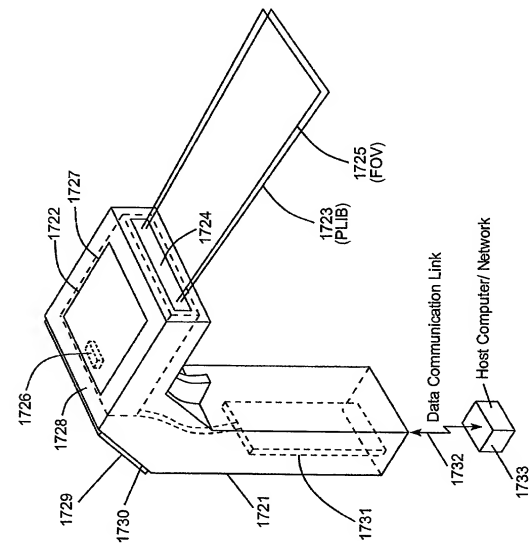
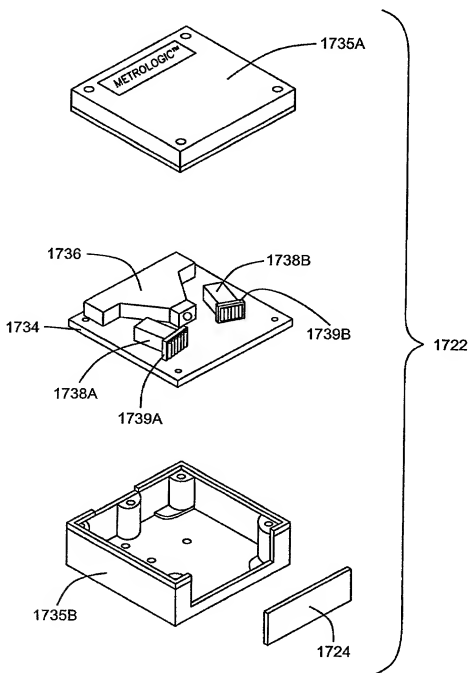


FIG. 48A





202180-01175001

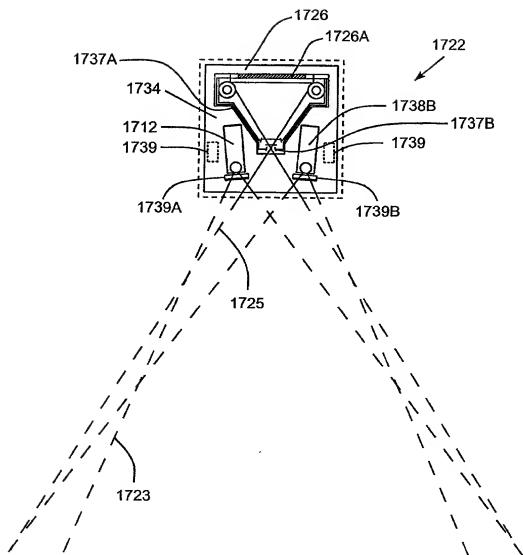


FIG. 48C



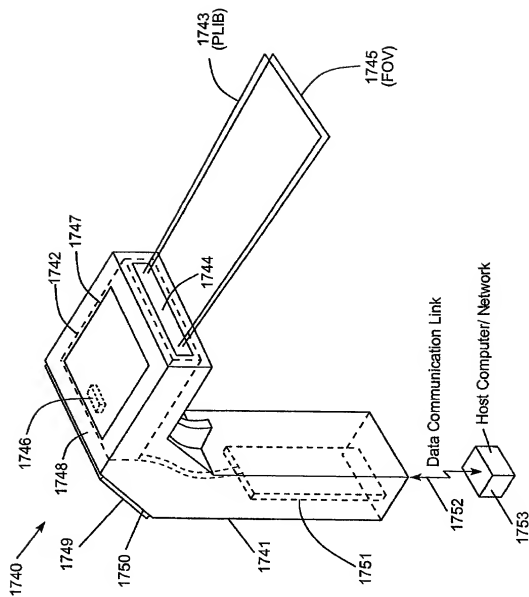


FIG. 49A



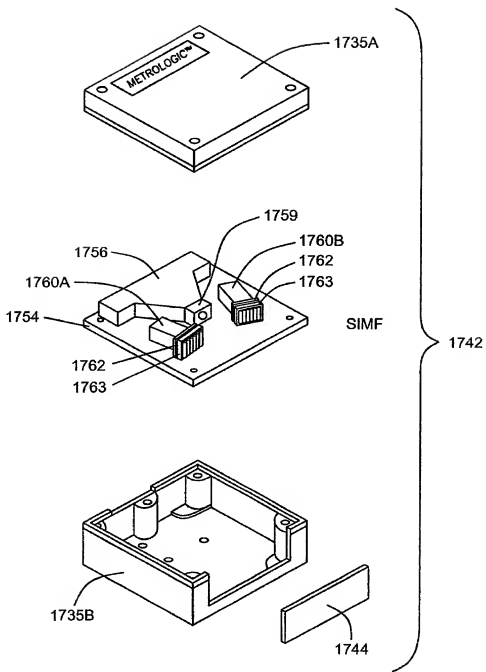


FIG. 49B



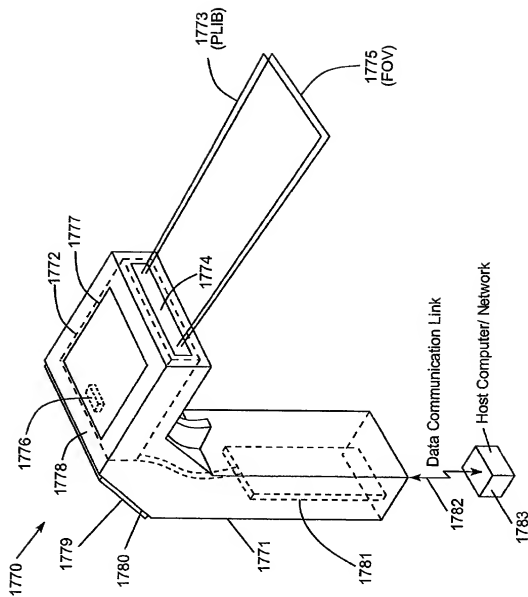


FIG. 50A



202180-04728007

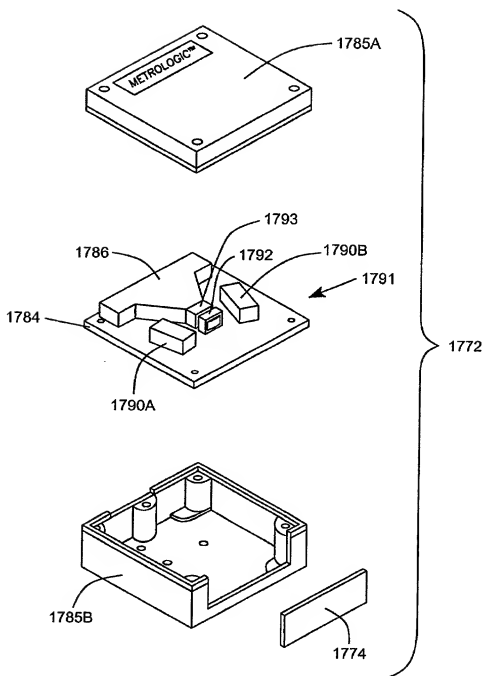


FIG. 50B



202180-04729007

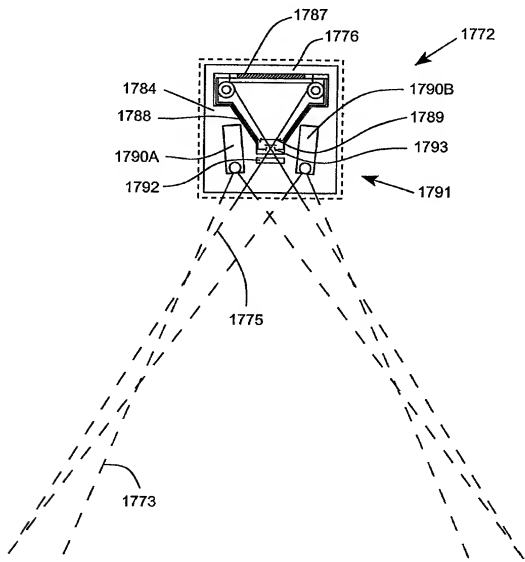


FIG. 50C



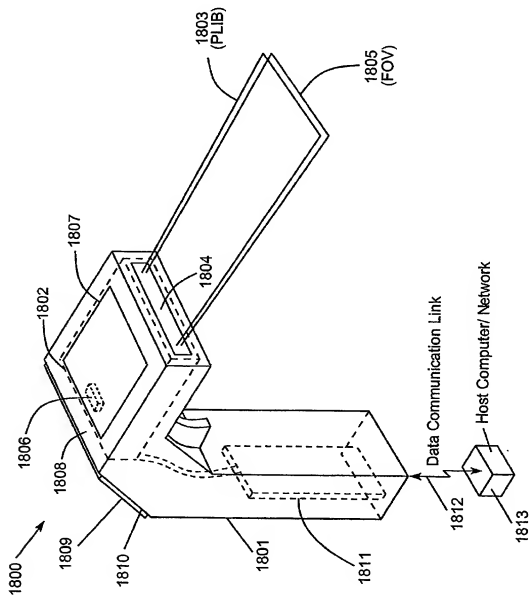


FIG. 51A



20071402001

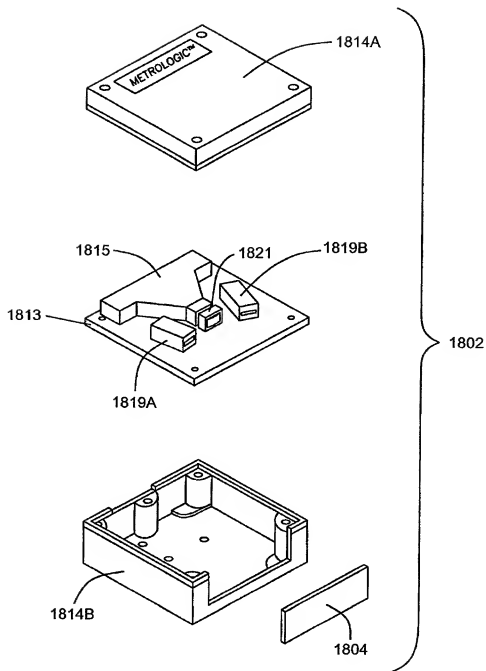


FIG. 51B



202180-04129001

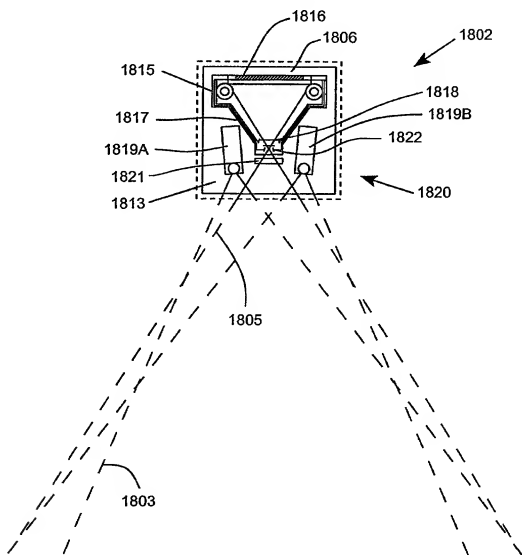


FIG. 51C



202180-04125001

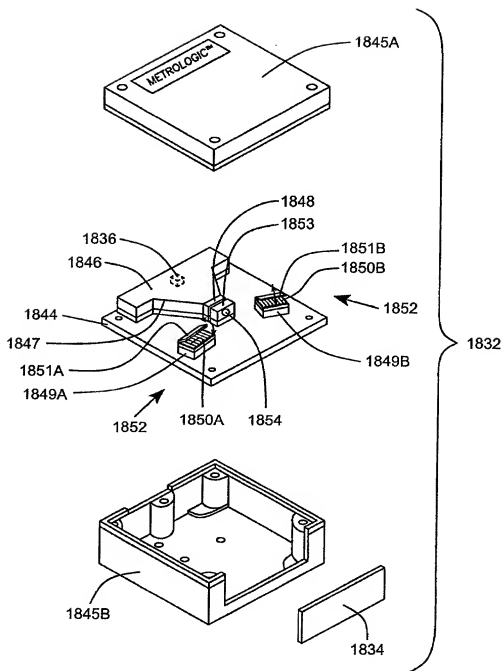


Fig. 113A-3B

FIG. 52B



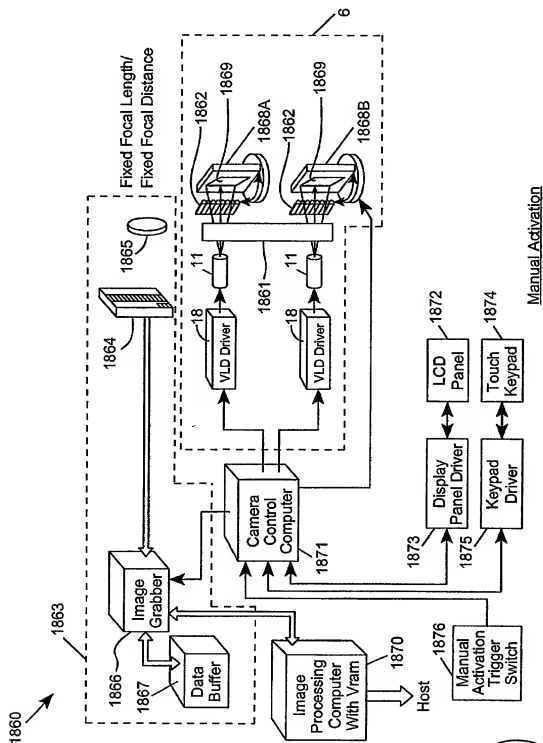


FIG. 53A1



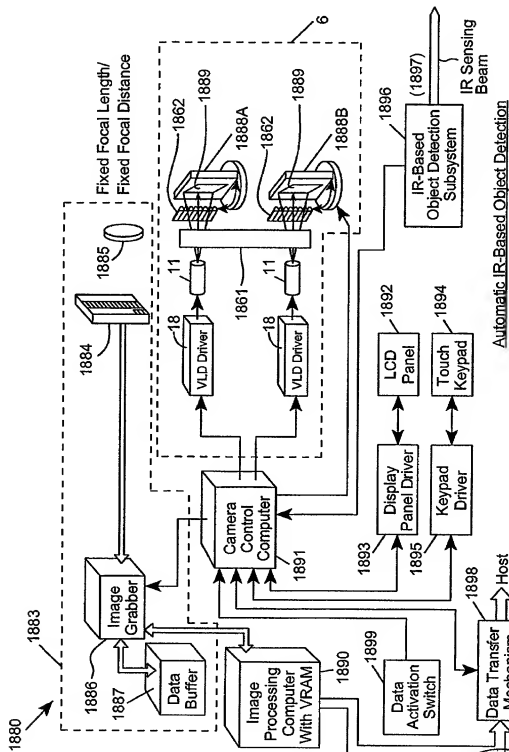


FIG. 53A2



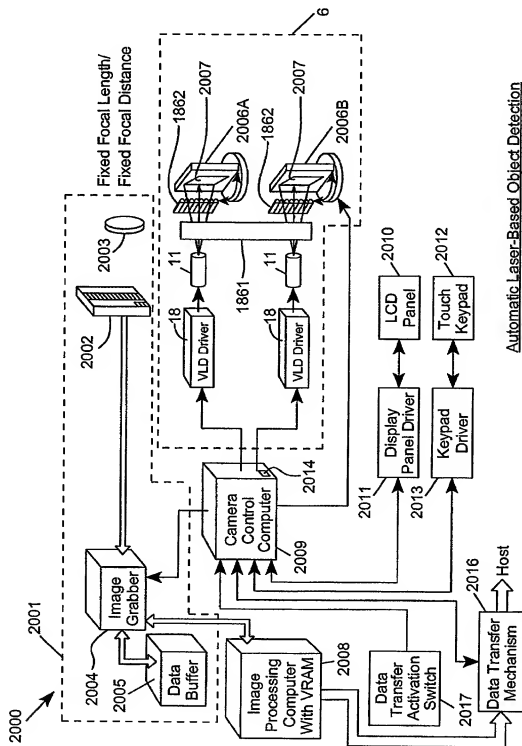


FIG. 53A3



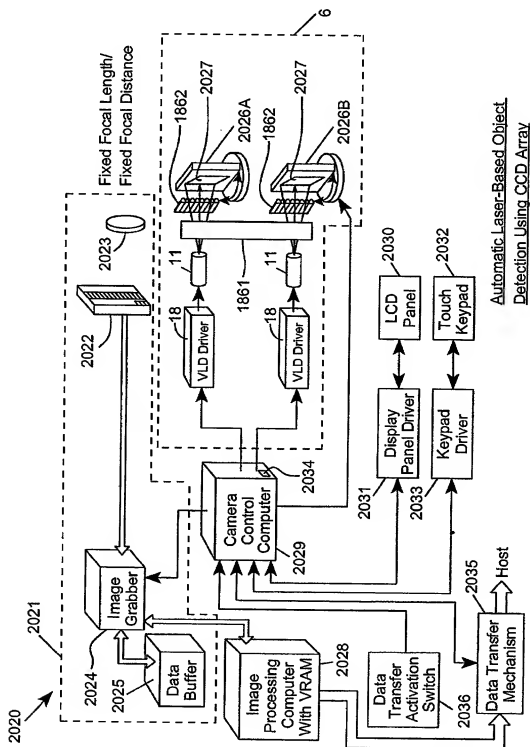


FIG. 53A4



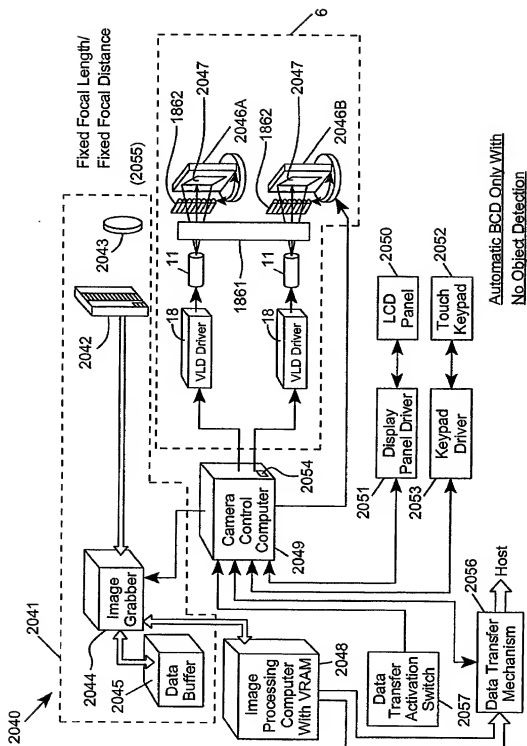


FIG. 53A5



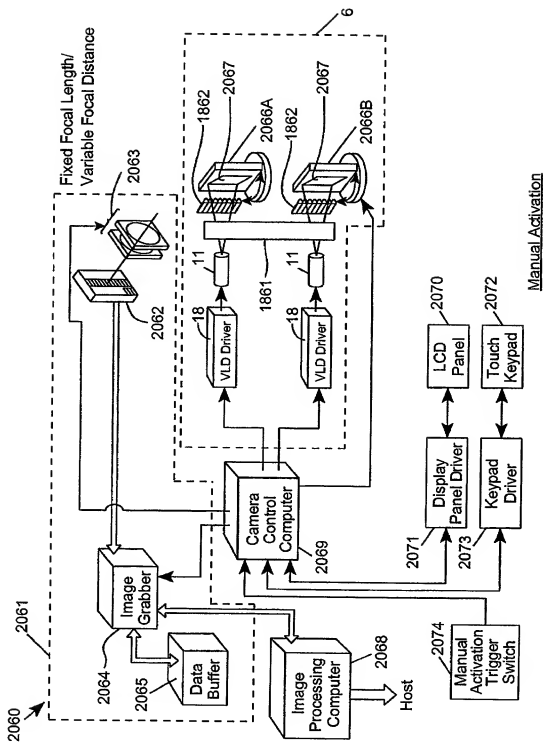


FIG. 53B1



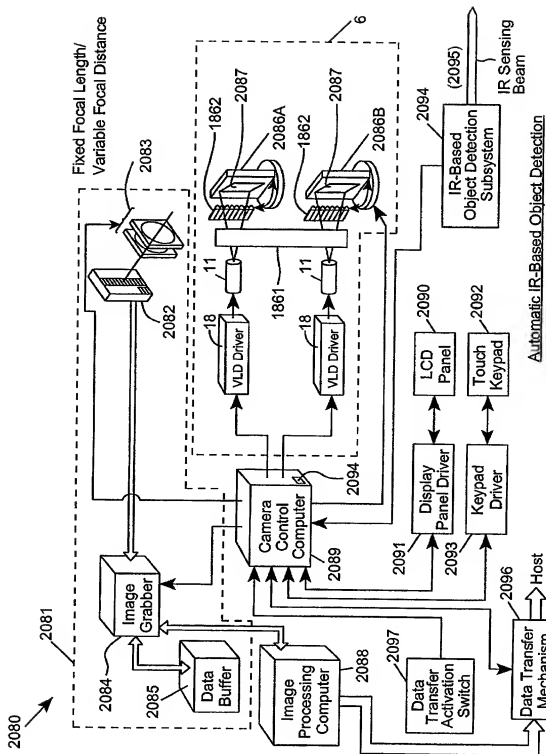


FIG. 53B2



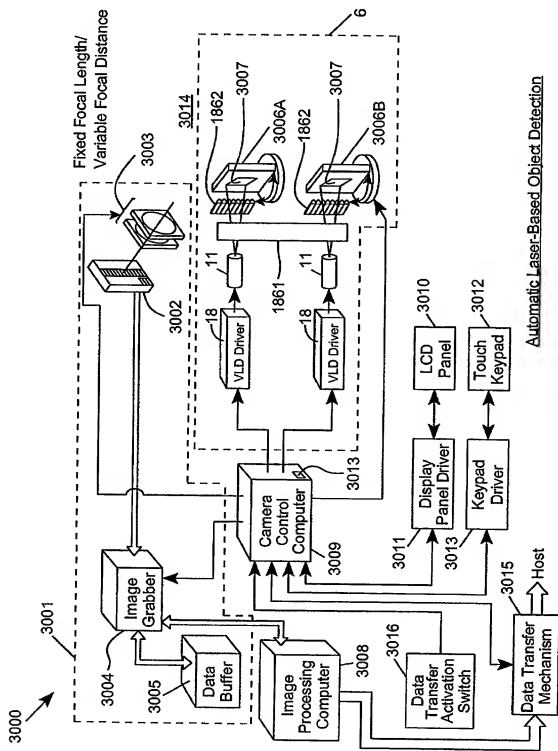


FIG. 53B3



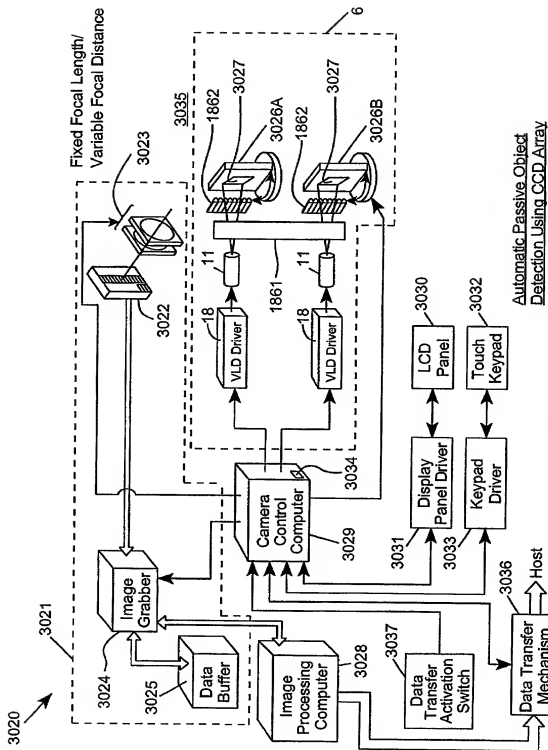
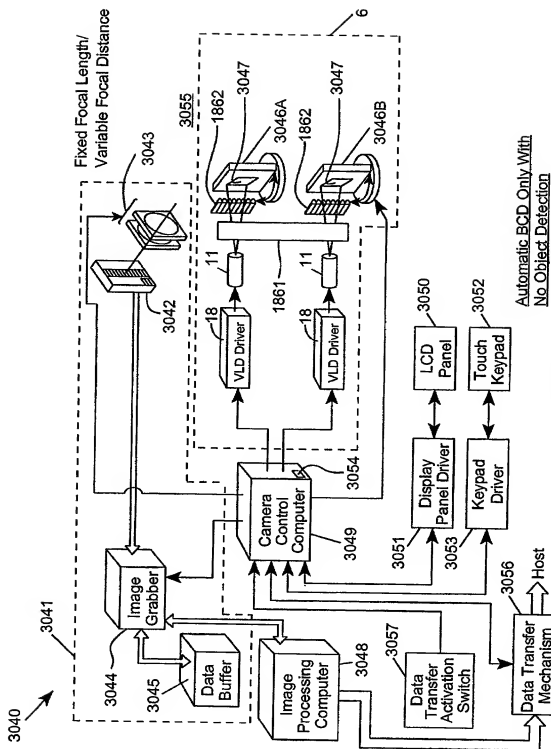


FIG. 53B4





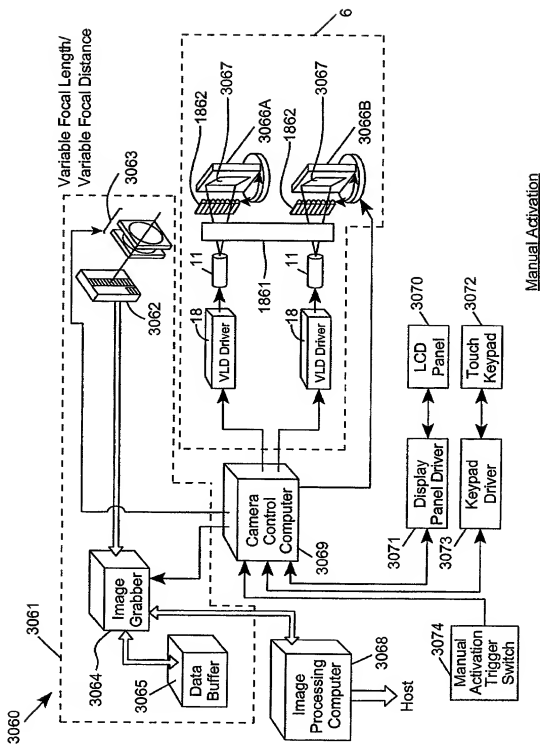


FIG. 53C1



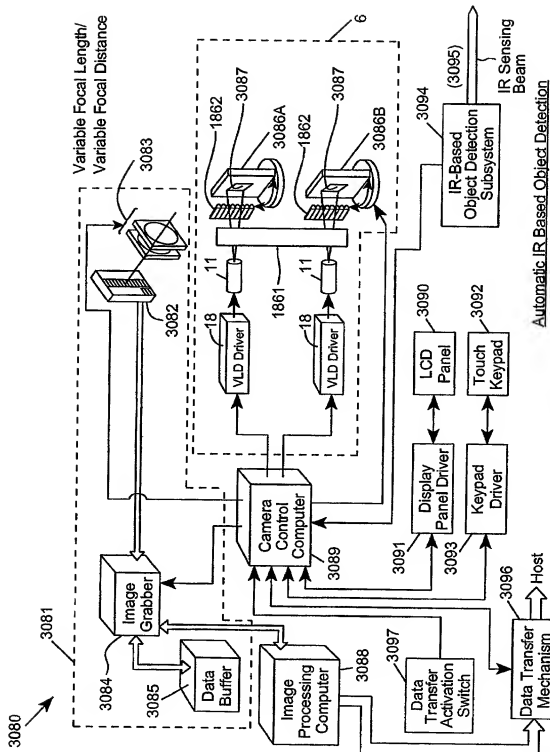


FIG. 53C2



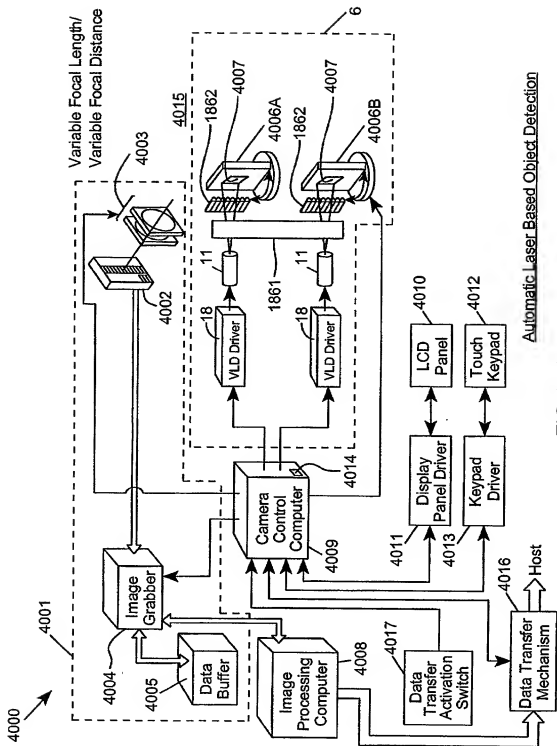


FIG. 53C3



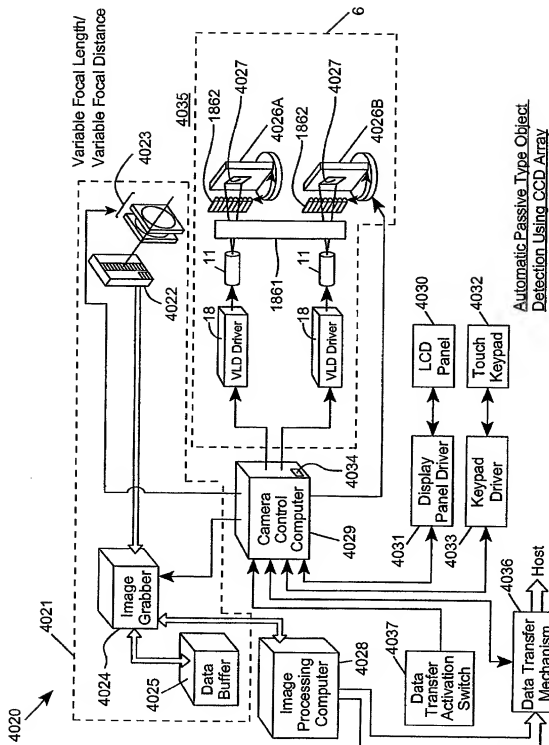


FIG. 53C4



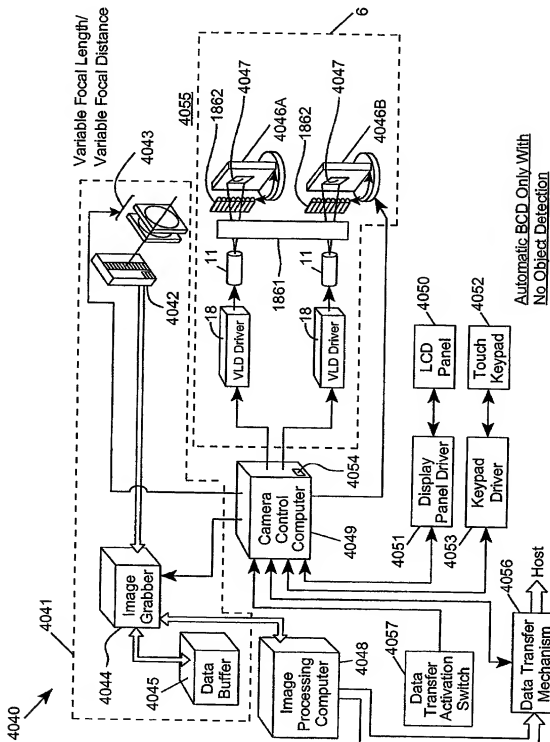


FIG. 53C5



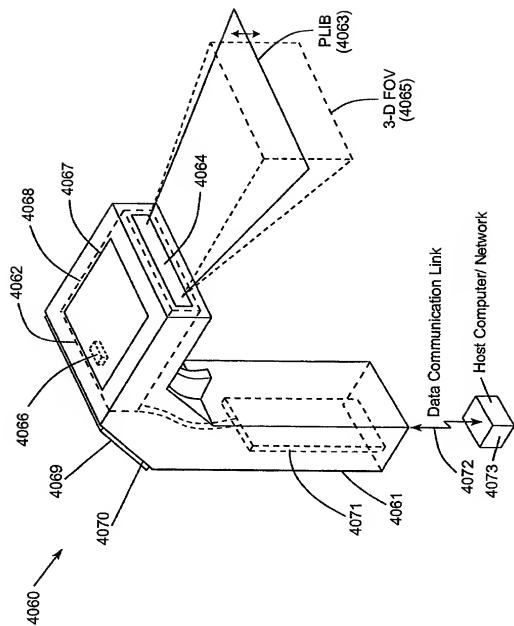


FIG. 54A



202100-0472001

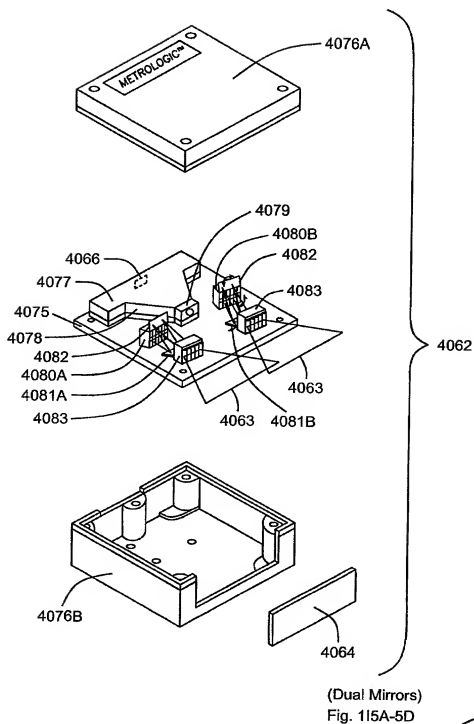


FIG. 54B

(Dual Mirrors)
Fig. 115A-5D



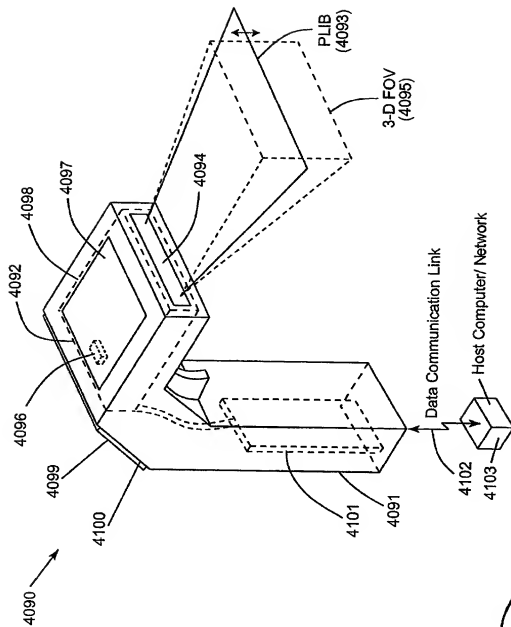
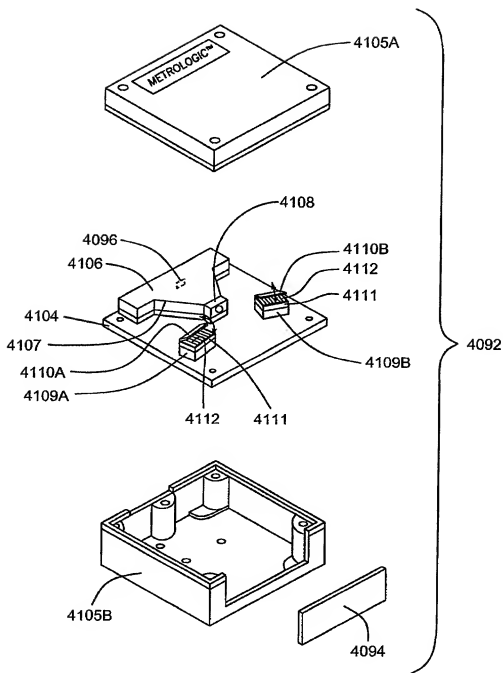


FIG. 55A



202180-01129001



Bragg Cell
Fig. 116A-6B

FIG. 55B



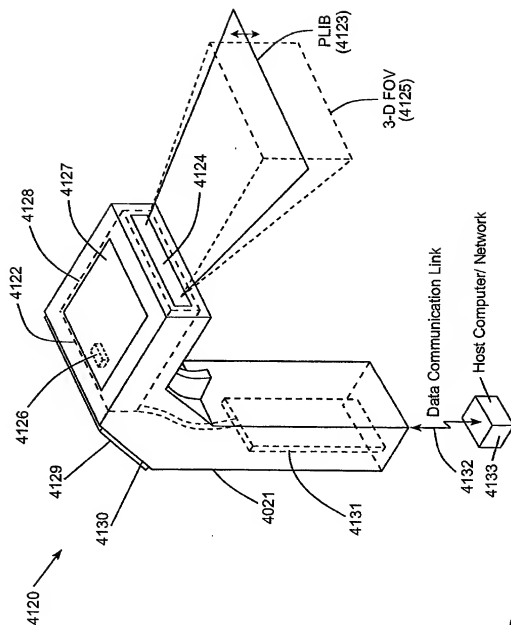
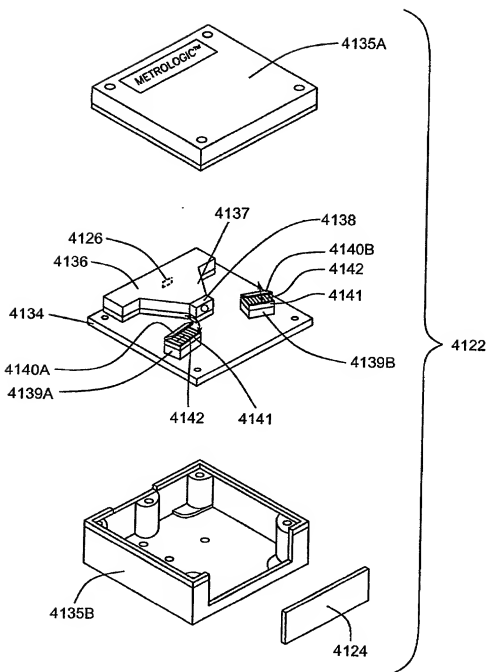


FIG. 56A



2025-04-20 10:05:40 081202



DM
Fig. 117A-7B

FIG. 56B



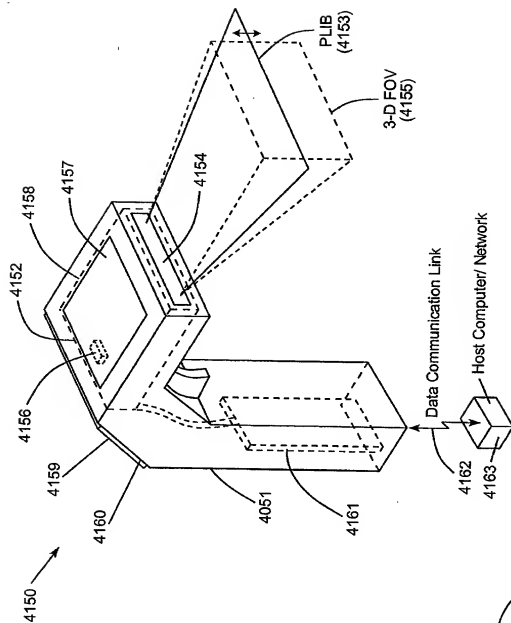
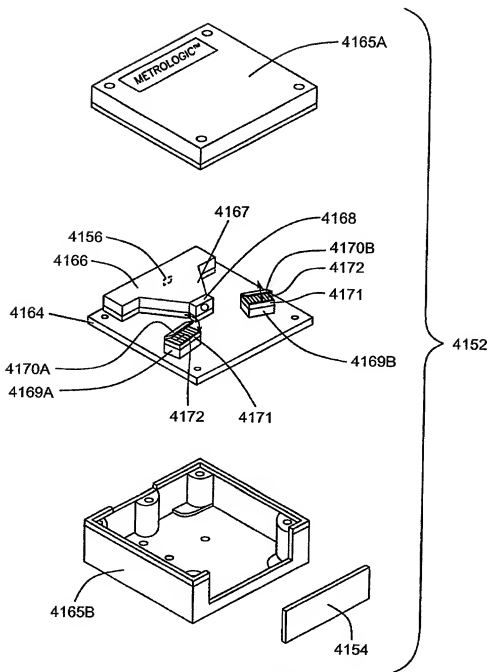


FIG. 57A



202180-04725001



Phase Only LCD
PM Panel

Fig. 118F-8G

FIG. 57B



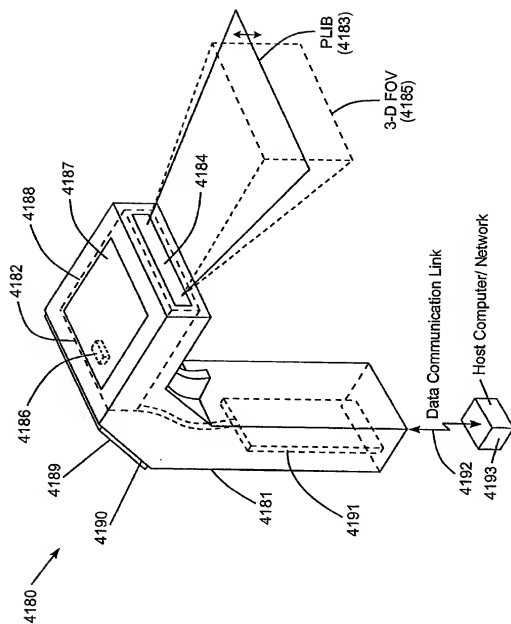
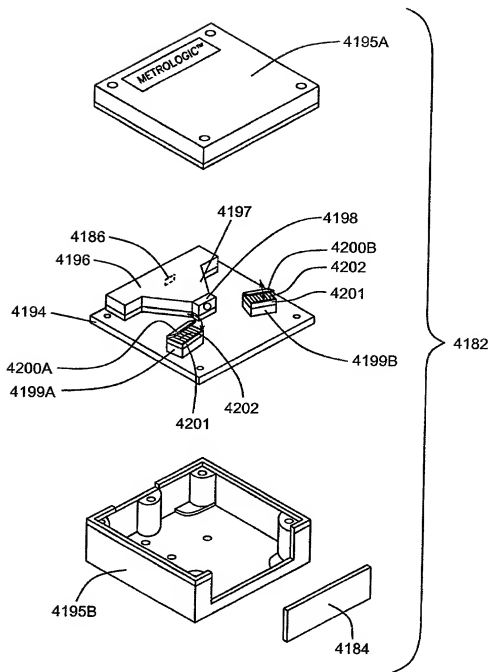


FIG. 58A



202180-0412001

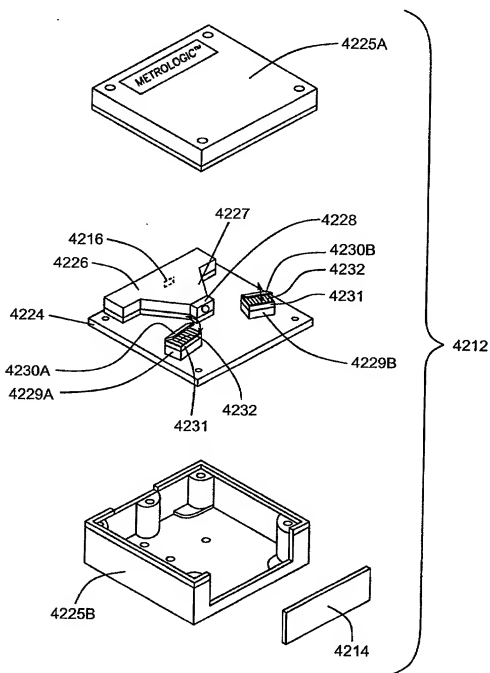


HS Optical Shutter
Fig. 1114A-14B

FIG. 58B



202180-0412001



MLLD

Fig. 1115A-15B

FIG. 59B



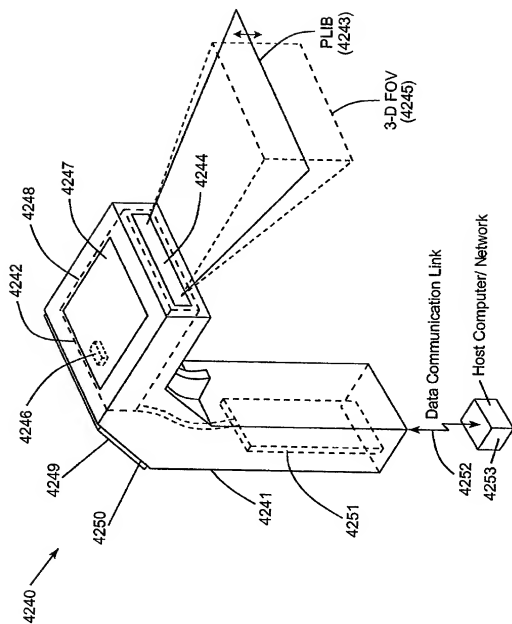
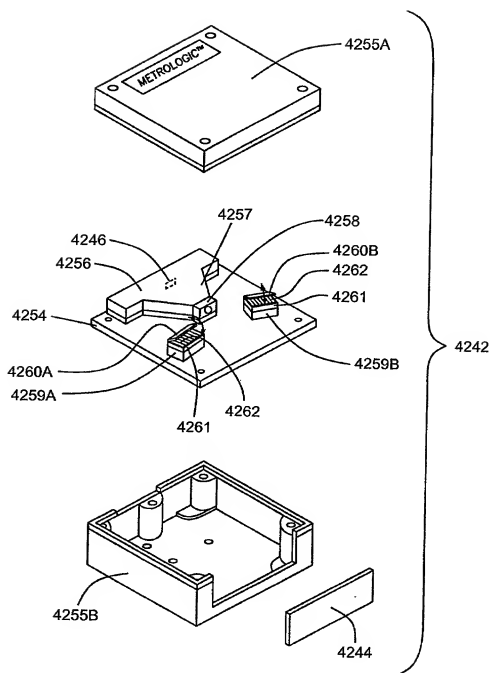


FIG. 60A



202408-04112001



Etalon (Temp. Phase Mod.)

Fig. 1117A-17B

FIG. 60B



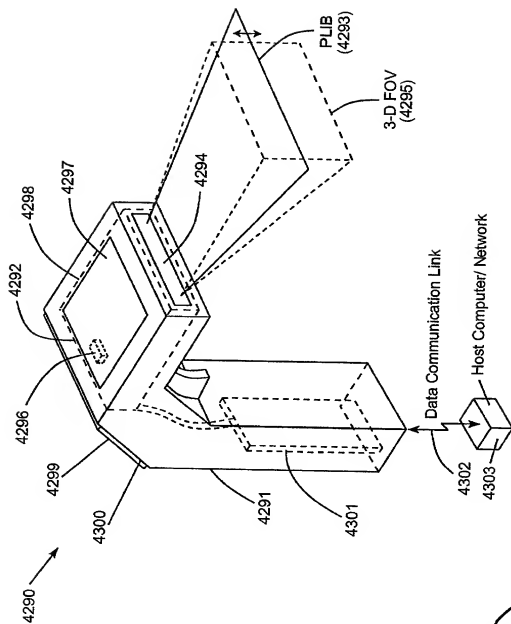
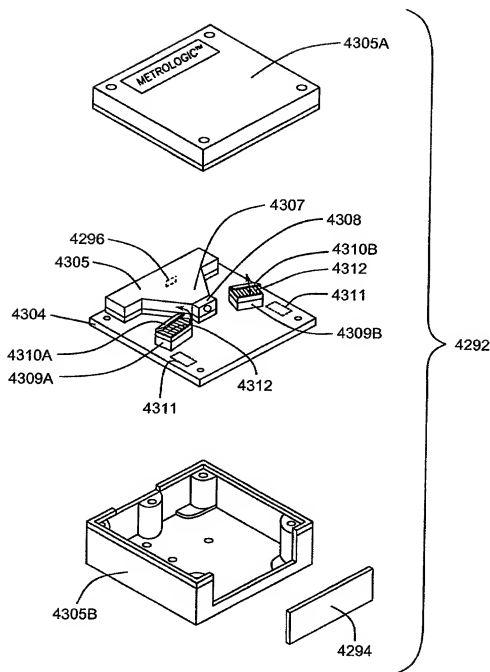


FIG. 61A



202180-01125001



Mode Hopping
Fig. 1119A-19B

FIG. 61B



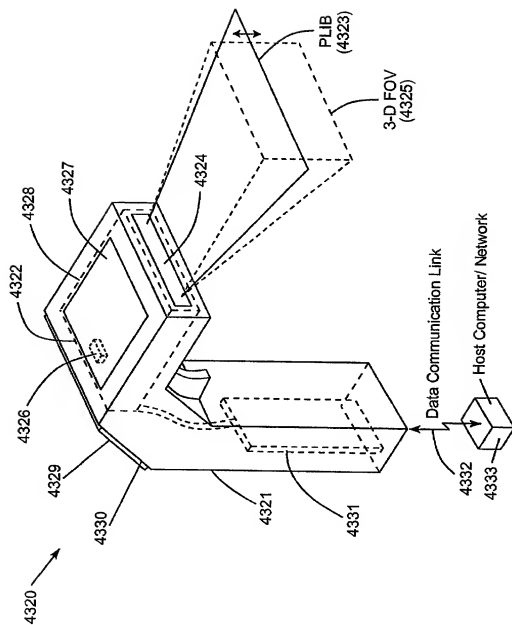
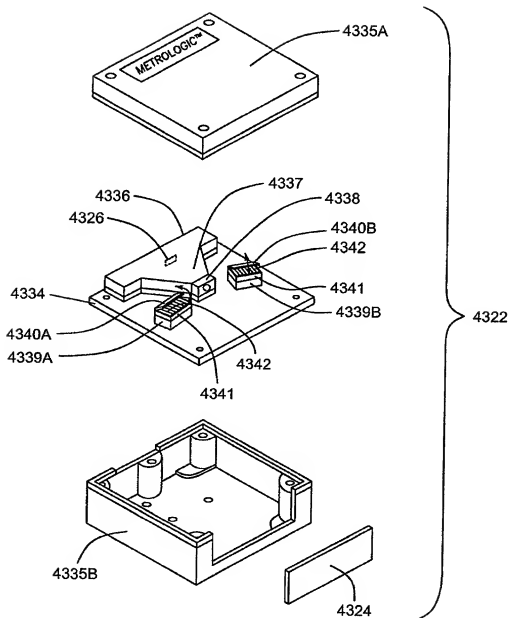


FIG. 62A





Micro-oscillating
Spatial Intensity
Modulation Panels
Fig. 1121A-21D

FIG. 62B



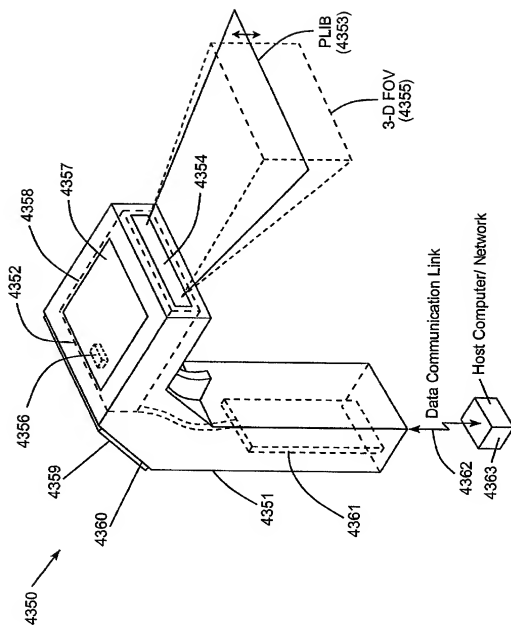
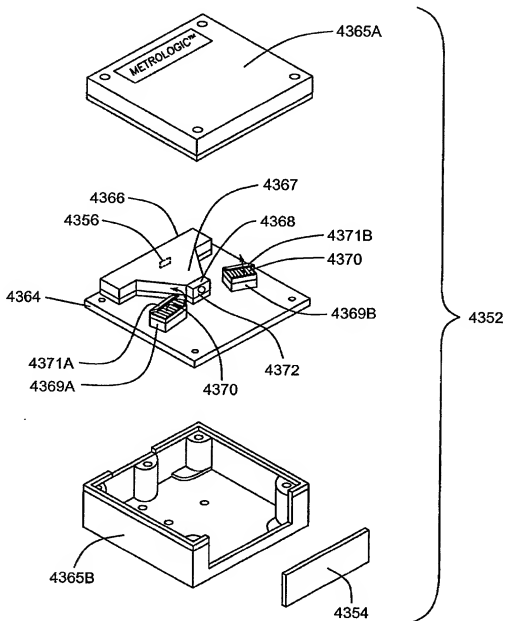


FIG. 63A



202180-04125001



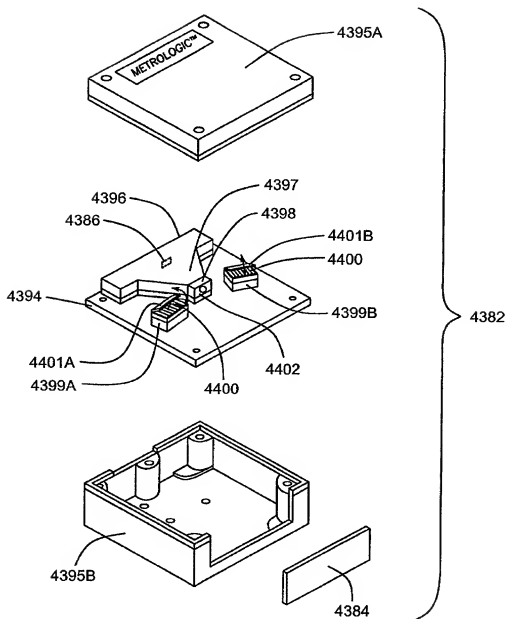
EO or Mechanically
Rotating Iris

Fig. 1123A-23B

FIG. 63B



202430 07125001



E-optical Shutter
Before IFD Lens
Fig. 1124A

FIG. 64B



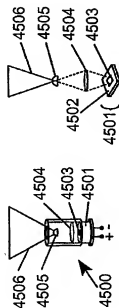


FIG. 65A

FIG. 65B

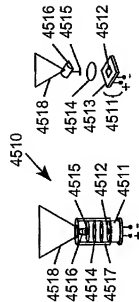


FIG. 66A

FIG. 66B

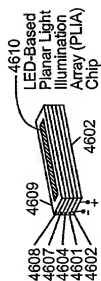


FIG. 67A

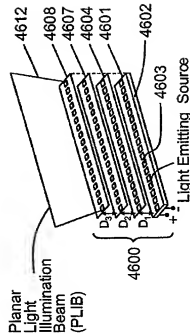


FIG. 67B

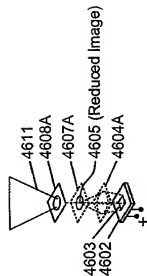


FIG. 67C

